



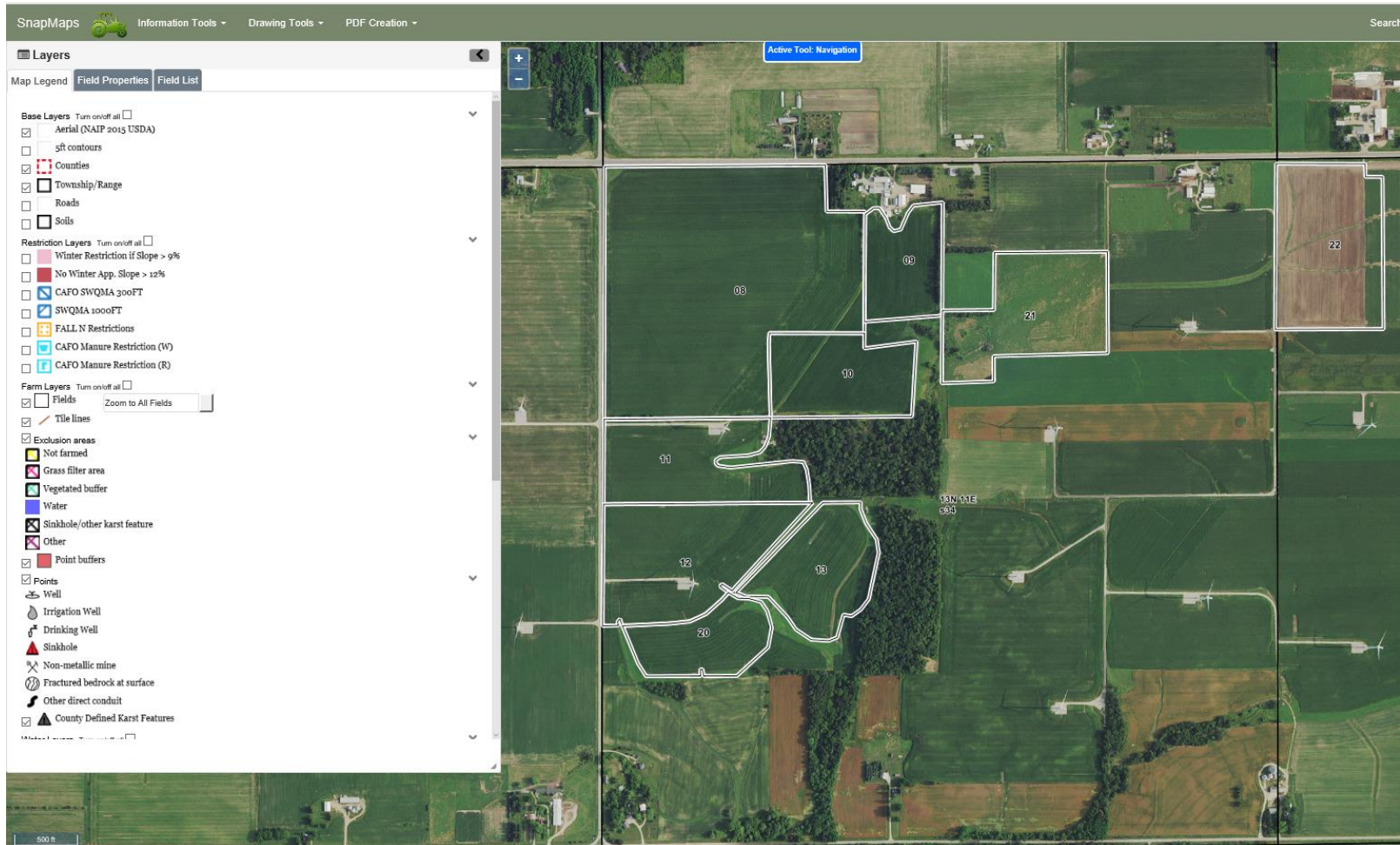
# What's new for SnapPlus 16.0

Wisconsin Nutrient Management Implementation Workshops

James Beaudoin, Sarah Sebrosky, Joe Wolter

# What is SnapMaps

A web based tool for making nutrient management planning easier.



# Geographic Layers

- All to assist in creating a Nutrient Management Plan.

**Base Layers** Turn on/off all ☐

☒ Aerial (USGS)

☐ 5ft contours

☒ Counties

☒ Township/Range

☐ Roads

☐ Soils

**Restriction Layers** Turn on/off all ☐

☐ Winter Restriction if Slope > 9%

☐ No Winter App. Slope > 12%

☐ 590 SWQMA 300FT

☐ SWQMA 1000FT

☐ Fall N Restrictions

**Farm Layers** Turn on/off all ☐

☒ Fields

☒ Tile lines

☒ Exclusion areas

☒ Not farmed

☒ Grass filter area

☒ Vegetated buffer

☒ Water

☒ Sinkhole/other karst feature

☒ Other

☒ Point buffers

☒ Points

☒ Well

☒ Irrigation Well

☒ Drinking Well

☒ Sinkhole

☒ Non-metallic mine

☒ Fractured bedrock at surface

☒ Other direct conduit

☒ County Defined Karst Features

**Water Layers** Turn on/off all ☐

☐ DNR Wetland

☐ Perennial Streams

☐ Intermittent Streams

☐ Waterbodies

☐ HUC 12 Watershed

☐ HUC 8 Basin

☐ Impaired Waters (303d)

☐ Outstanding/Exceptional Waters

☒ Concentrated flow channels

☐ Designed grassed waterway

☐ Permanent vegetated channel

☐ Unvegetated ephemeral channel

☐ Drainage ditch

☐ Gully

**2015 590 layers** Turn on/off all ☐

☐ Well compensation

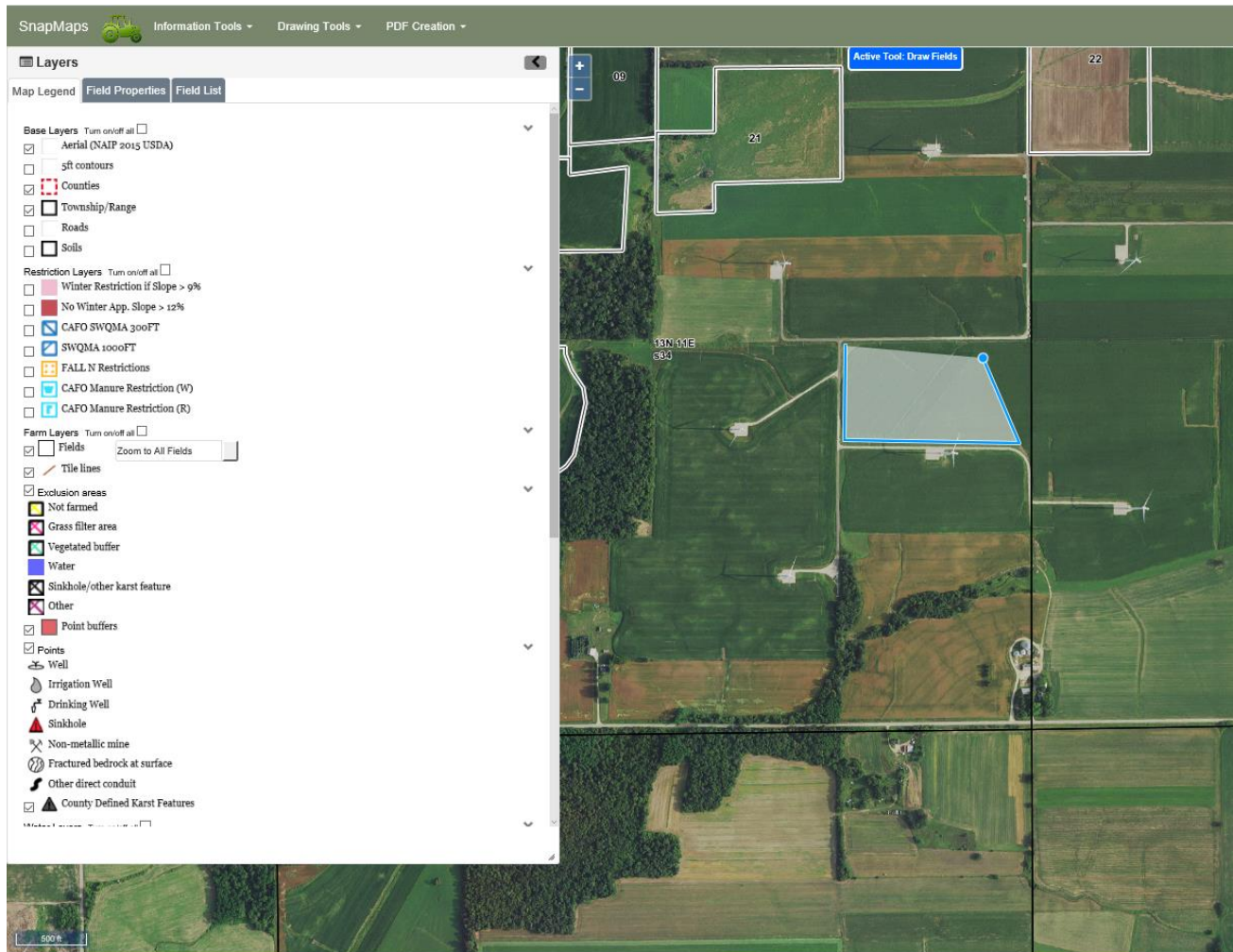
☐ Community wells 1000ft

☐ Shallow Silurian

☐ Bedrock depth <5ft

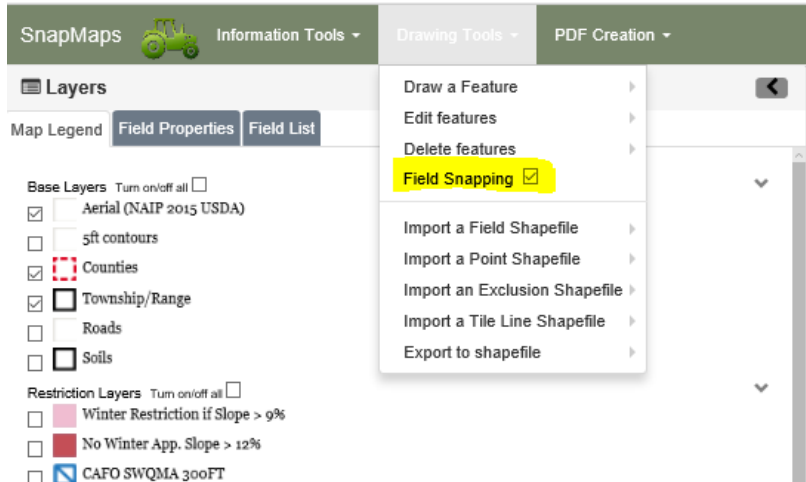
# How do I get my fields in SnapMaps?

Manually draw you fields in by hand. Similar to DATCP site.



# How do I get my fields in SnapMaps?

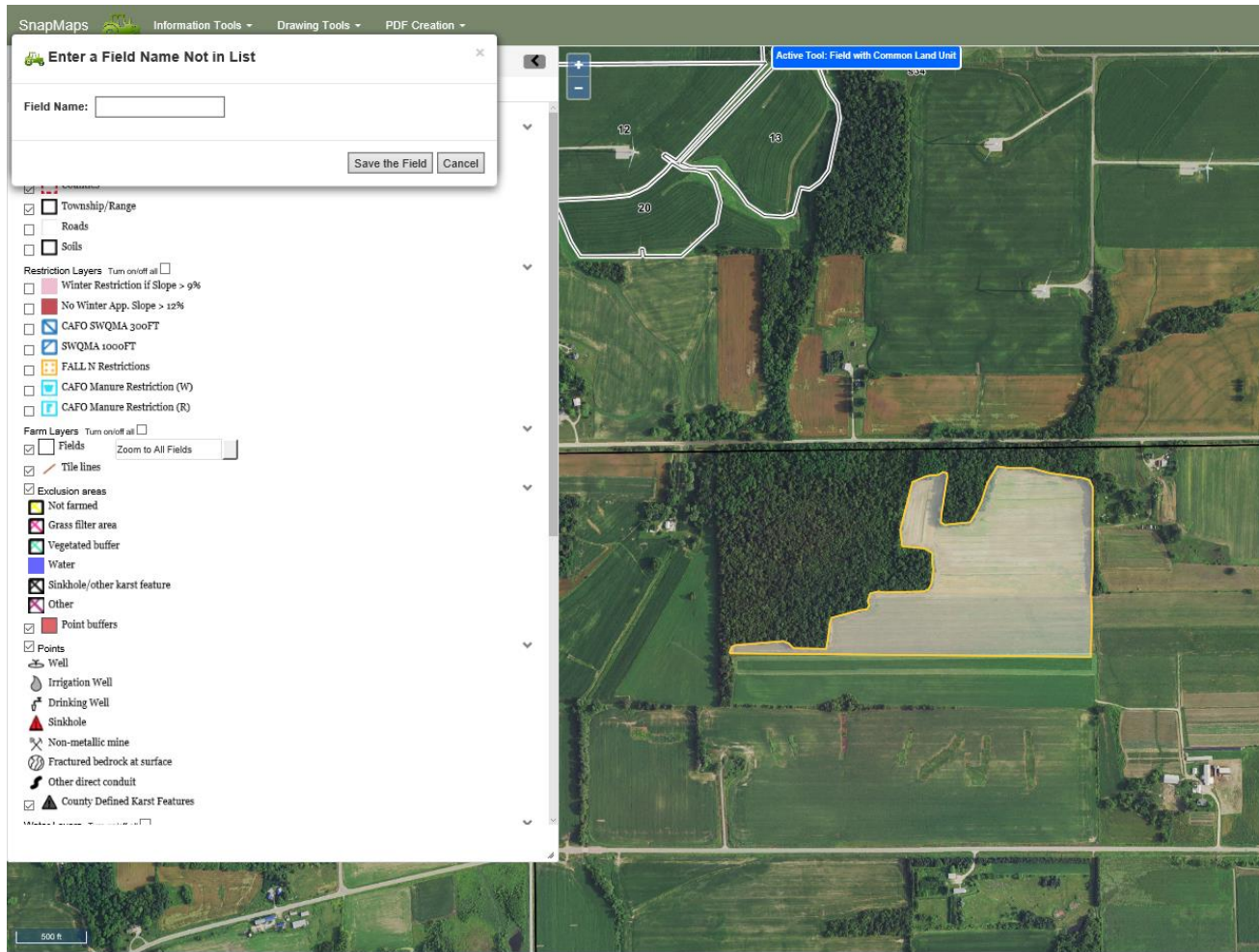
When manually drawing, the Snapping tool very helpful if you want to draw shared boundaries.





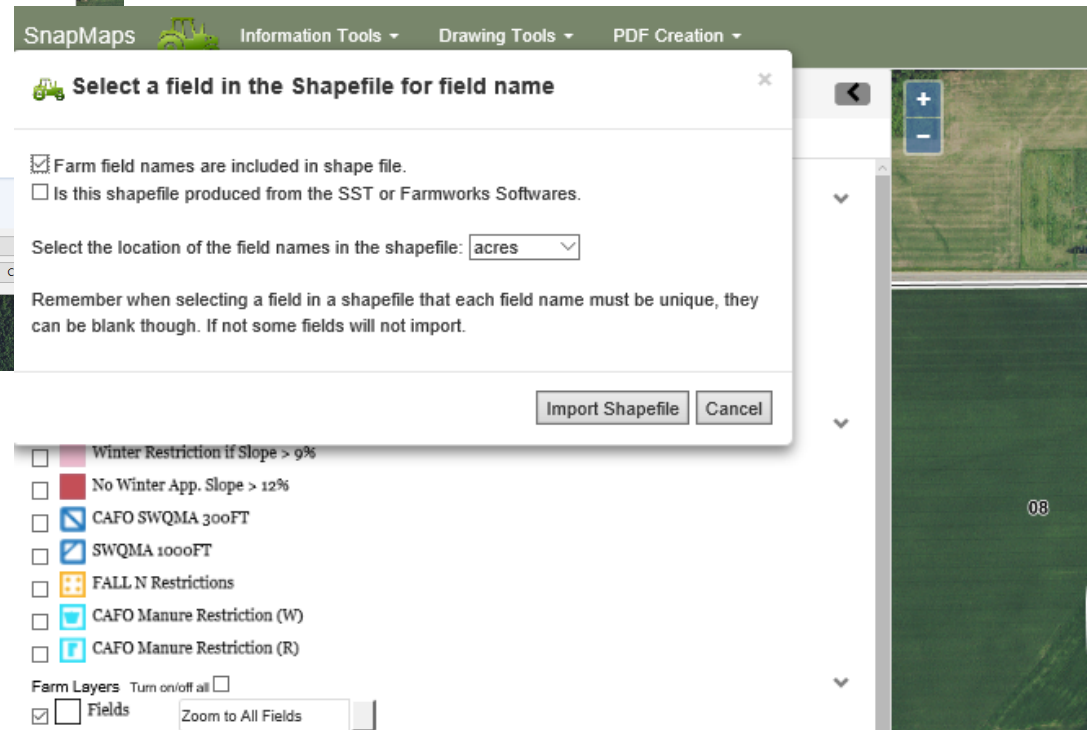
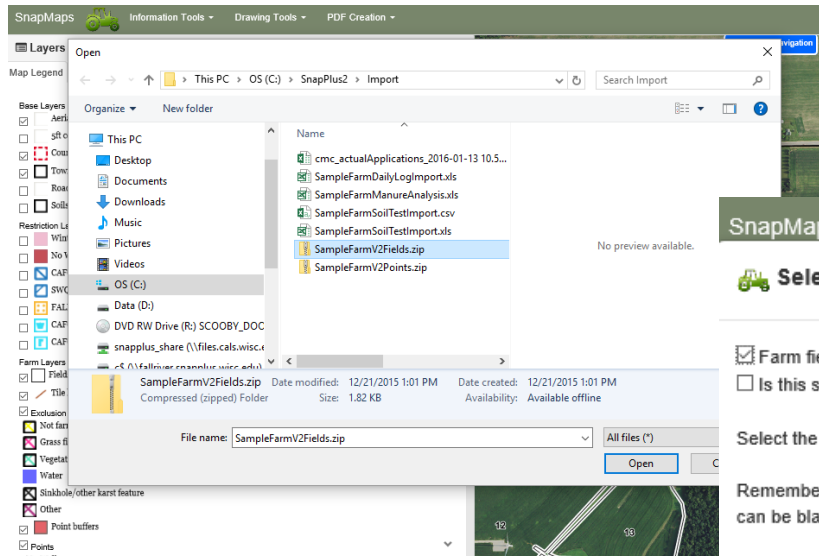
# How do I get my fields in SnapMaps?

Draw fields using the Common Land Unit (CLU) layer.



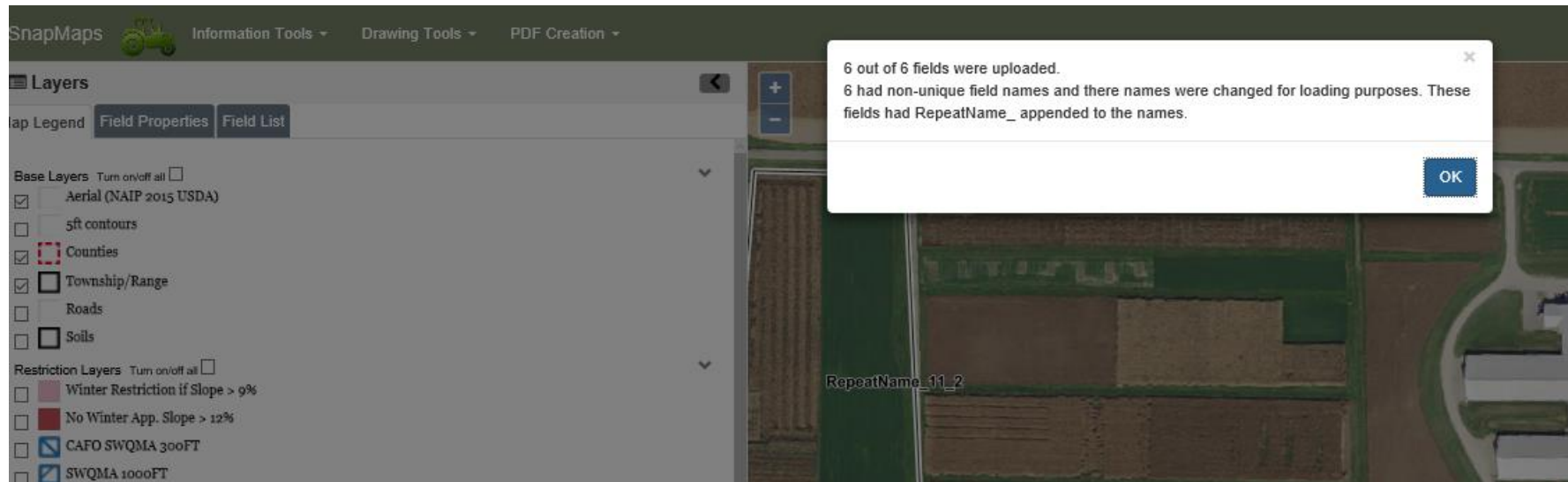
# How do I get my fields in SnapMaps?

Import shapefiles. Shapefiles are GIS files that contain geography and data about the geography.



# How do I get my fields in SnapMaps?

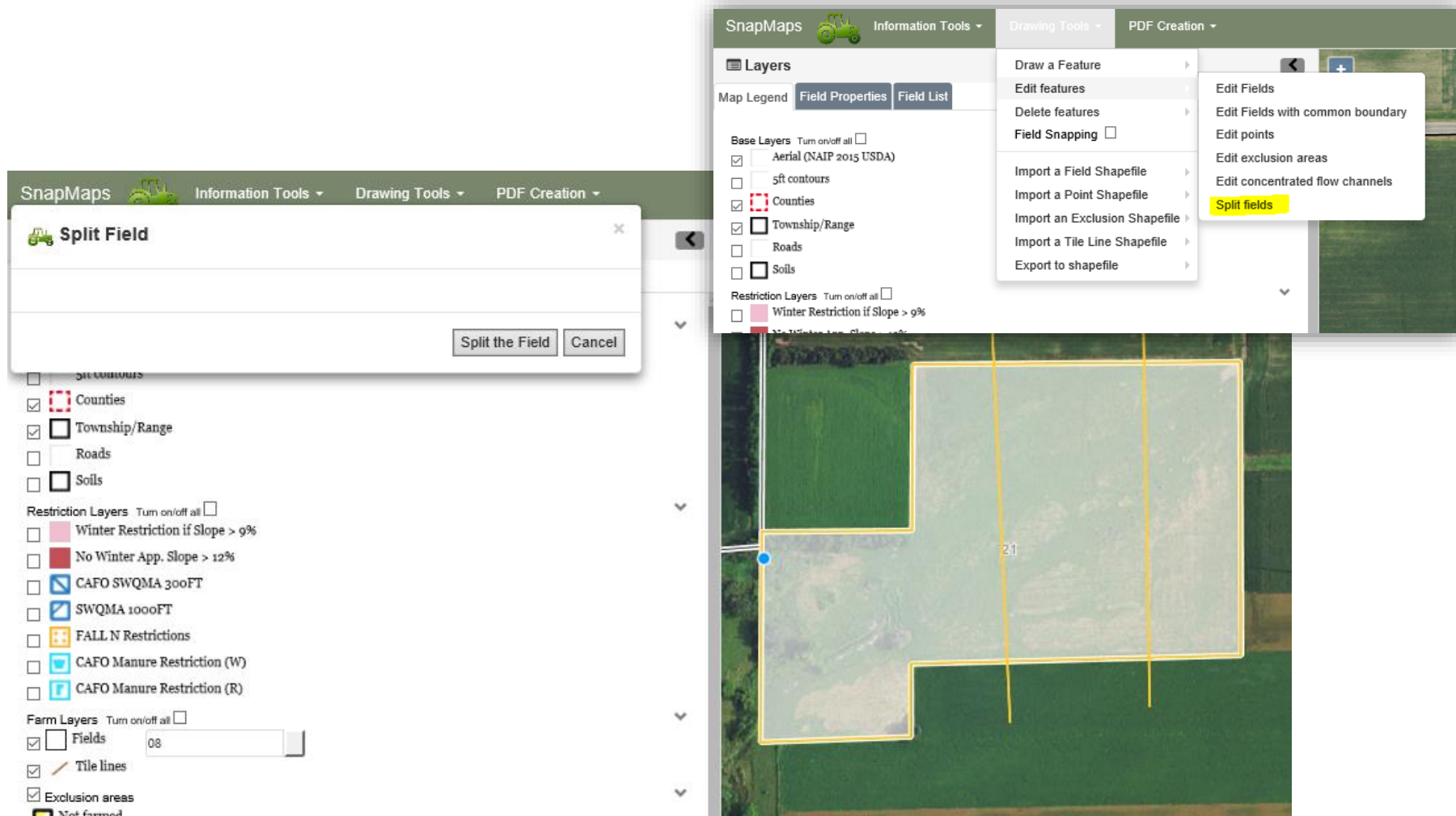
Report of shapefile import. Any non-unique names will be renamed.





# Split a fields geography

You can split a field into several separate fields.



The screenshot displays the SnapMaps application interface. On the left, a 'Split Field' dialog box is open, showing a list of layers and a 'Split the Field' button. The main map area shows a field with a yellow outline. On the right, the 'Drawing Tools' menu is open, showing options like 'Draw a Feature', 'Edit features', 'Delete features', 'Field Snapping', 'Import a Field Shapefile', 'Import a Point Shapefile', 'Import an Exclusion Shapefile', 'Import a Tile Line Shapefile', and 'Export to shapefile'. The 'Split fields' option is highlighted in yellow.

**SnapMaps** Information Tools Drawing Tools PDF Creation

**Split Field**

Split the Field Cancel

**Layers**

Map Legend Field Properties Field List

Base Layers Turn on/off all ☐

- ☒ Aerial (NAIP 2015 USDA)
- ☐ 5ft contours
- ☒ Counties
- ☒ Township/Range
- ☐ Roads
- ☐ Soils

Restriction Layers Turn on/off all ☐

- ☐ Winter Restriction if Slope > 9%
- ☐ No Winter App. Slope > 12%
- ☐ CAFO SWQMA 300FT
- ☐ SWQMA 1000FT
- ☐ FALLN Restrictions
- ☐ CAFO Manure Restriction (W)
- ☐ CAFO Manure Restriction (R)

Farm Layers Turn on/off all ☐

- ☒ Fields 08
- ☒ Tile lines
- ☒ Exclusion areas
- ☐ Not farmed

**Drawing Tools**

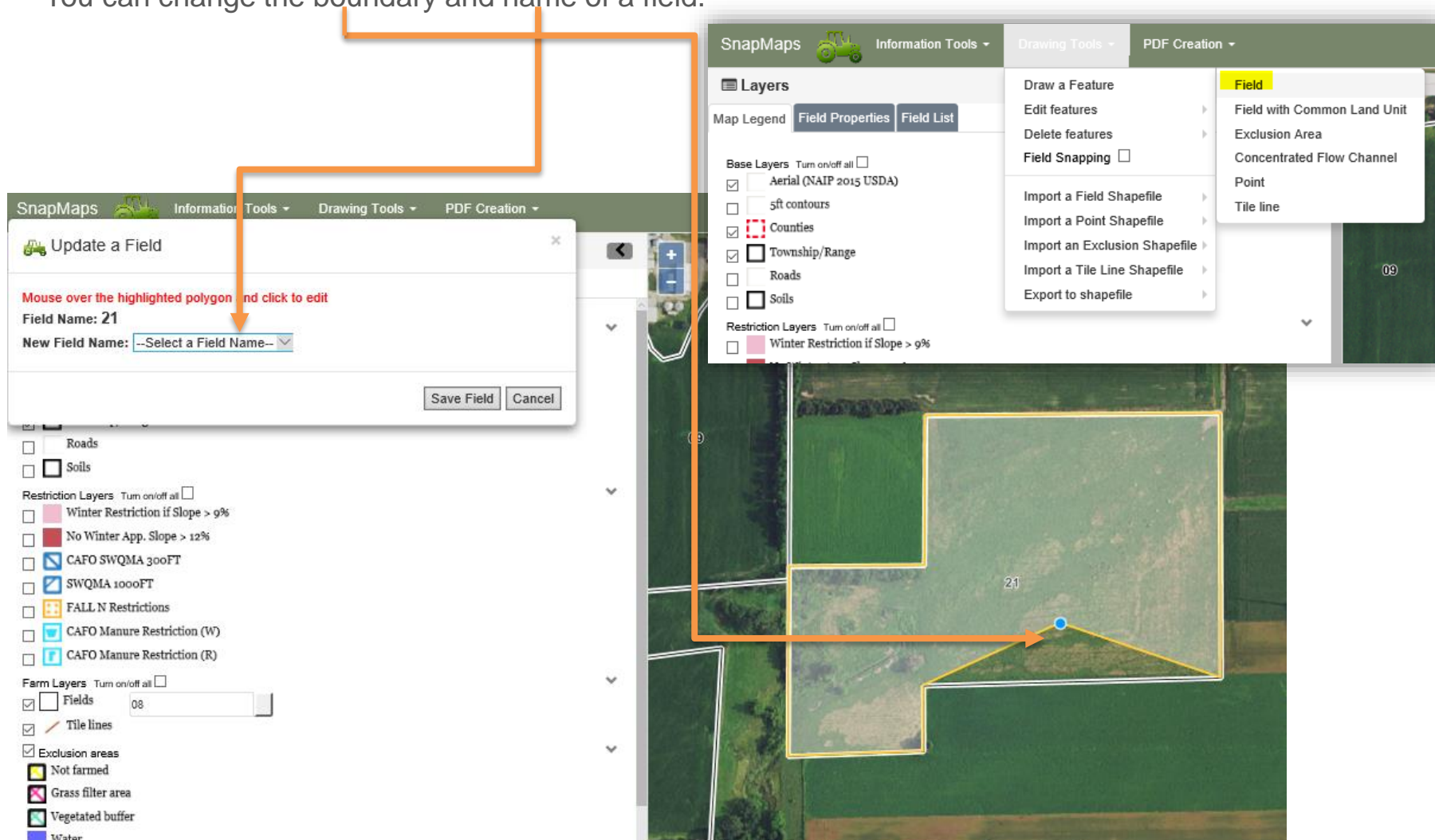
- Draw a Feature
- Edit features
- Delete features
- Field Snapping ☐
- Import a Field Shapefile
- Import a Point Shapefile
- Import an Exclusion Shapefile
- Import a Tile Line Shapefile
- Export to shapefile

**PDF Creation**

- Edit Fields
- Edit Fields with common boundary
- Edit points
- Edit exclusion areas
- Edit concentrated flow channels
- Split fields**

# Edit a field

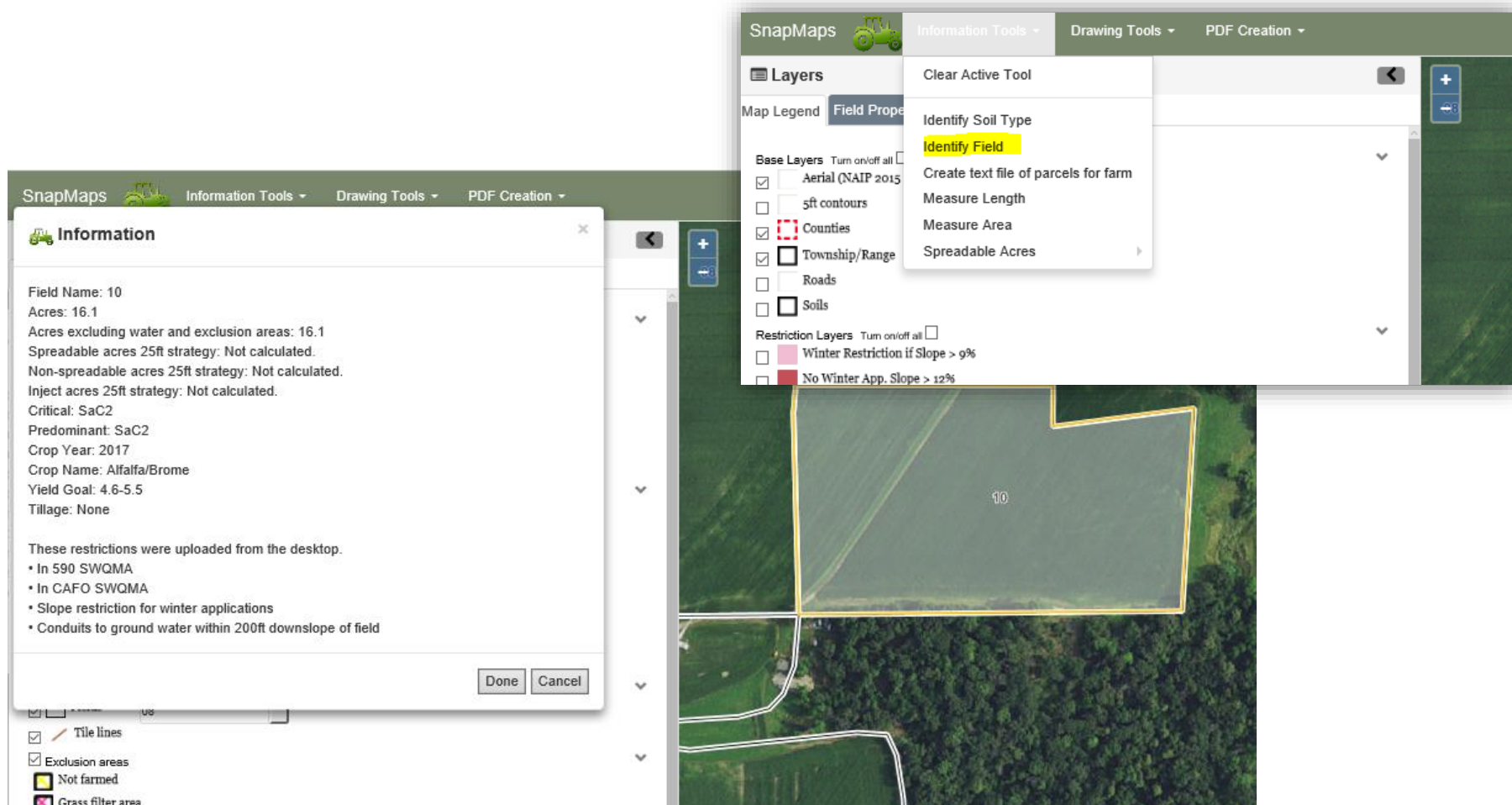
You can change the boundary and name of a field.



The screenshot displays the SnapMaps application interface. On the left, a map shows a field labeled '21' with a yellow boundary. An orange arrow points from the text 'You can change the boundary and name of a field.' to the 'Update a Field' dialog box. The dialog box has a title bar with a green tractor icon and the text 'Update a Field'. Below the title bar, it says 'Mouse over the highlighted polygon and click to edit'. The 'Field Name' is '21'. The 'New Field Name' is a dropdown menu with '--Select a Field Name--'. At the bottom of the dialog are 'Save Field' and 'Cancel' buttons. On the right, the 'Layers' panel is open, showing 'Map Legend', 'Field Properties', and 'Field List' tabs. The 'Field Properties' tab is active. It lists 'Base Layers' (Aerial, 5ft contours, Counties, Township/Range, Roads, Soils) and 'Restriction Layers' (Winter Restriction if Slope > 9%, No Winter App. Slope > 12%, CAFO SWQMA 300FT, SWQMA 1000FT, FALL N Restrictions, CAFO Manure Restriction (W), CAFO Manure Restriction (R)). A dropdown menu is open from the 'Field Properties' tab, showing options: 'Field', 'Field with Common Land Unit', 'Exclusion Area', 'Concentrated Flow Channel', 'Point', and 'Tile line'. The 'Field' option is highlighted.

# Helpful Tools

Identify soils and fields to get information about where you clicked on the map.



The screenshot displays the SnapMaps application interface. The main window shows an aerial map with a field labeled '10' highlighted in yellow. Overlaid on the map are two windows:

**Information Window:**

- Field Name: 10
- Acres: 16.1
- Acres excluding water and exclusion areas: 16.1
- Spreadable acres 25ft strategy: Not calculated.
- Non-spreadable acres 25ft strategy: Not calculated.
- Inject acres 25ft strategy: Not calculated.
- Critical: SaC2
- Predominant: SaC2
- Crop Year: 2017
- Crop Name: Alfalfa/Brome
- Yield Goal: 4.6-5.5
- Tillage: None

These restrictions were uploaded from the desktop.

- In 590 SWQMA
- In CAFO SWQMA
- Slope restriction for winter applications
- Conduits to ground water within 200ft downslope of field

Buttons: Done, Cancel

**Information Tools Dropdown Menu:**

- Clear Active Tool
- Identify Soil Type
- Identify Field** (highlighted)
- Create text file of parcels for farm
- Measure Length
- Measure Area
- Spreadable Acres

**Map Legend:**

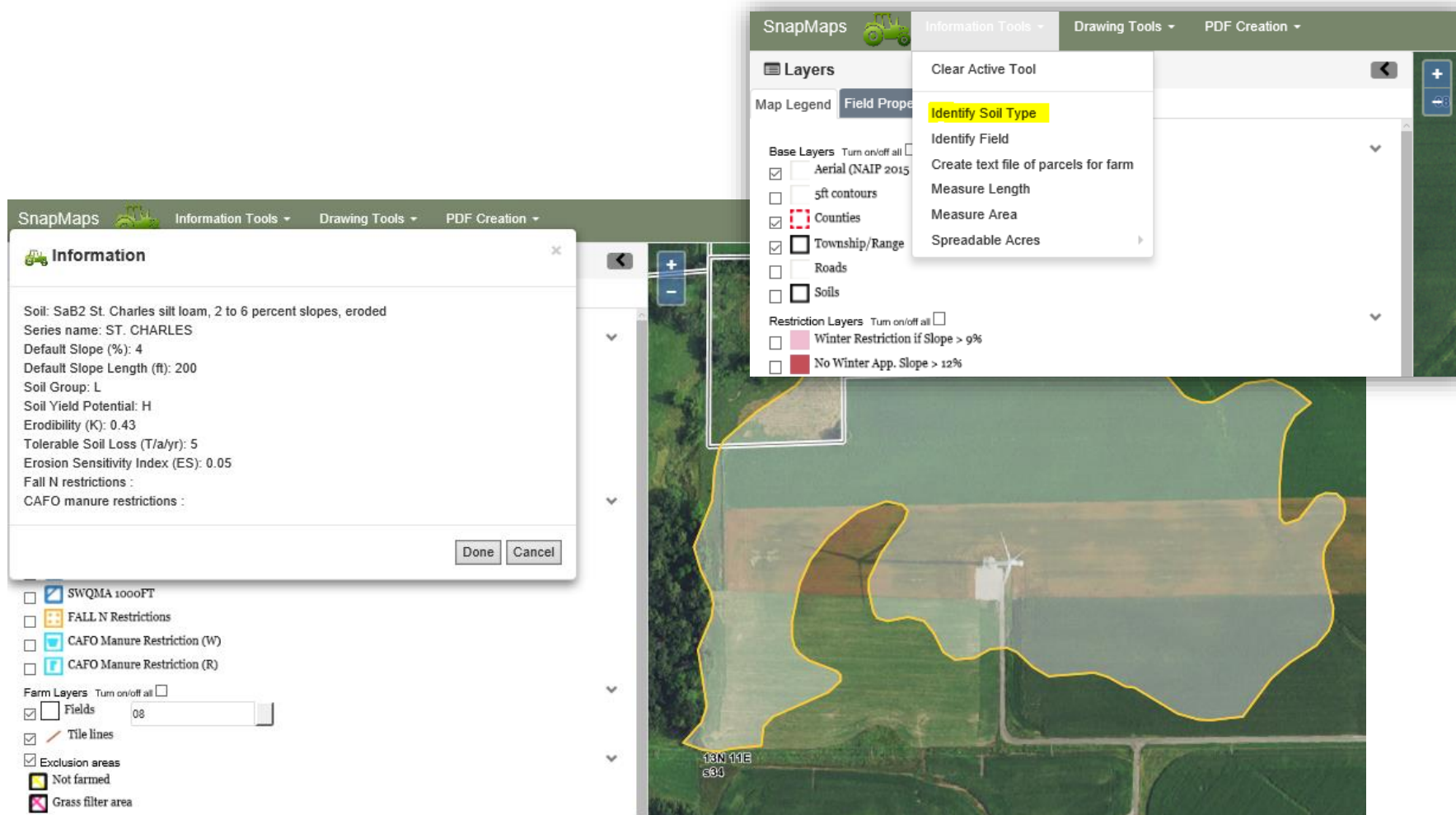
- Base Layers** Turn on/off all
  - ☒ Aerial (NAIP 2015)
  - ☐ 5ft contours
  - ☒ Counties
  - ☒ Township/Range
  - ☐ Roads
  - ☐ Soils
- Restriction Layers** Turn on/off all
  - ☐ Winter Restriction if Slope > 9%
  - ☐ No Winter App. Slope > 12%

**Map Legend:**

- ☒ Tile lines
- ☒ Exclusion areas
- ☒ Not farmed
- ☒ Grass filter area

# Helpful Tools

Identify soils and fields to get information about where you clicked on the map.



The screenshot displays the SnapMaps web application interface. The main map area shows an aerial view of a rural landscape with various colored overlays representing different land use or soil types. A yellow outline highlights a specific field area. Overlaid on the map are two panels and a dropdown menu.

**Information Panel (Left):**

- Soil:** SaB2 St. Charles silt loam, 2 to 6 percent slopes, eroded
- Series name:** ST. CHARLES
- Default Slope (%):** 4
- Default Slope Length (ft):** 200
- Soil Group:** L
- Soil Yield Potential:** H
- Erodibility (K):** 0.43
- Tolerable Soil Loss (T/a/yr):** 5
- Erosion Sensitivity Index (ES):** 0.05
- Fall N restrictions:**
- CAFO manure restrictions:**

**Layers Panel (Left):**

- Base Layers:** Turn on/off all ☐
  - ☒ Aerial (NAIP 2015)
  - ☐ 5ft contours
  - ☒ Counties
  - ☒ Township/Range
  - ☐ Roads
  - ☐ Soils
- Restriction Layers:** Turn on/off all ☐
  - ☐ Winter Restriction if Slope > 9%
  - ☐ No Winter App. Slope > 12%

**Dropdown Menu (Right):**

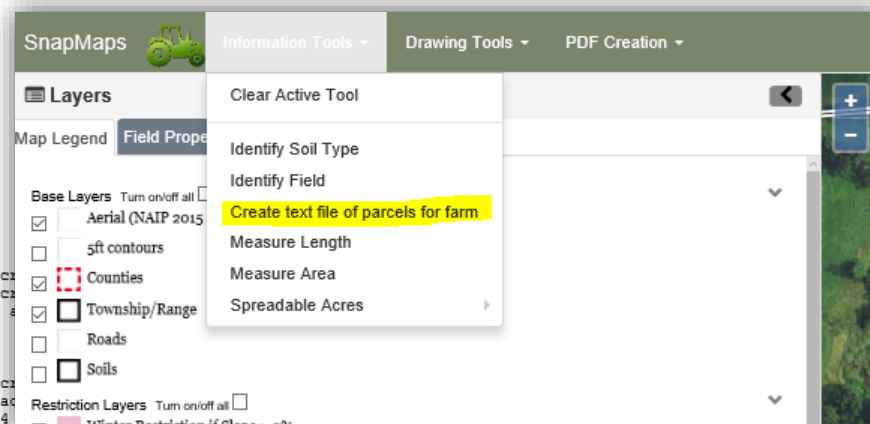
- Clear Active Tool
- Identify Soil Type** (highlighted)
- Identify Field
- Create text file of parcels for farm
- Measure Length
- Measure Area
- Spreadable Acres



# Helpful Tools

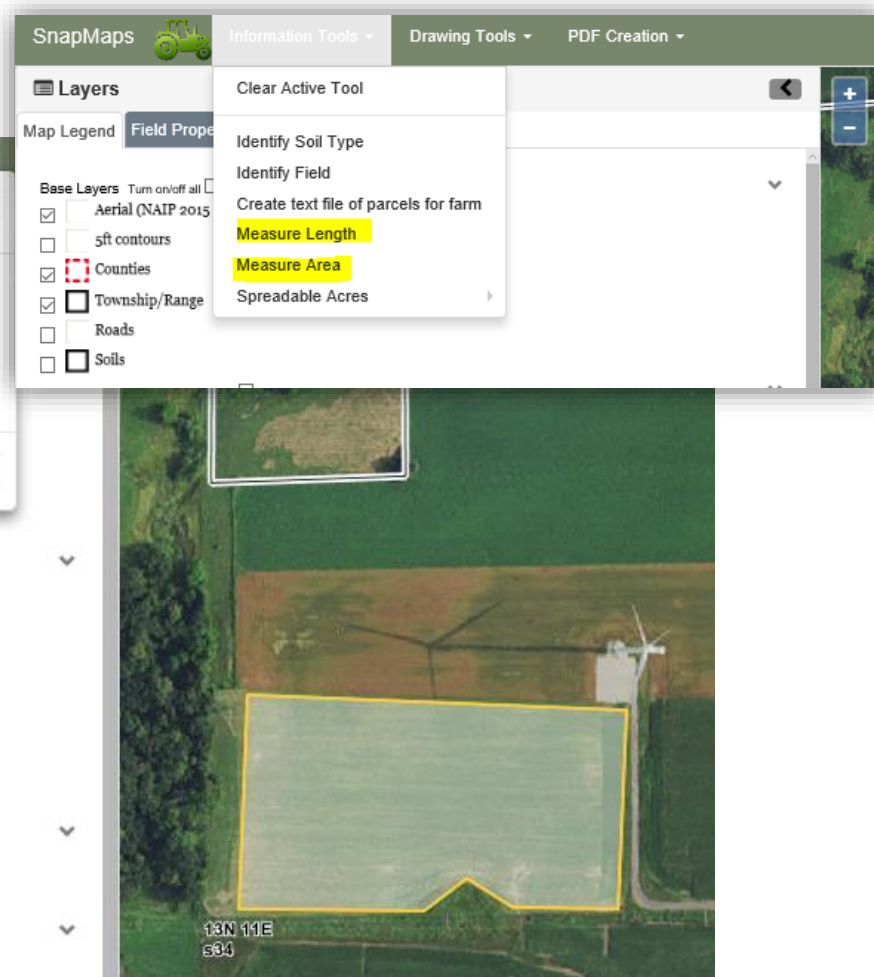
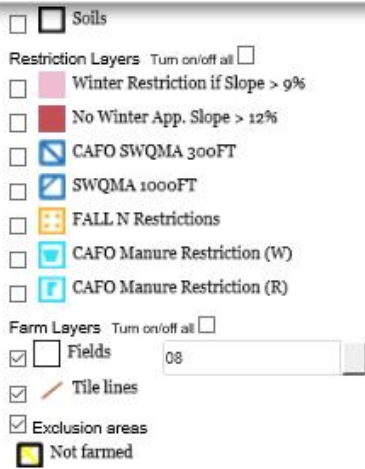
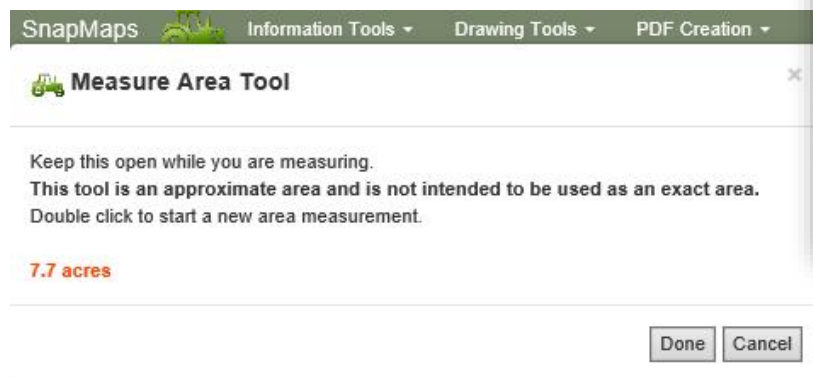
Create text-file of parcels that intersect your fields

```
'11036-691', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 08, 19.3773671875178 acres
'11036-692', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 08, 39.7688231376886 acres
'11036-693.A', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 08, 18.7684105836721 acres
'11036-686', BARDEN, LAURENCE J, 09, 0.406416405090898 acres
'11036-687', ROSEDALE CEMETERY ASSOCIATION, 09, 0.0110469874649707 acres
'11036-690', ROSEDALE PRESBYTERIAN CHURCH, 09, 0.0284141685138225 acres
'11036-691', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 09, 11.0834764622525 acres
'11036-691', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 10, 0.319911669755483 acres
'11036-692', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 10, 0.00778864837749814 acres
'11036-693.A', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 10, 0.173736859682493 acres
'11036-694.A', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 10, 15.5923137853883 acres
'11036-693', KRUEGER, JAMES C; KRUEGER, ROXANNE A, 11, 17.8558375977606 acres
'11036-693.A', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 11, 1.01632209342624 acres
'11036-694', KRUEGER, JAMES C; KRUEGER, ROXANNE A, 11, 2.1187640316258 acres
'11036-693', KRUEGER, JAMES C; KRUEGER, ROXANNE A, 12, 1.17242709516454 acres
'11036-694', KRUEGER, JAMES C; KRUEGER, ROXANNE A, 12, 0.252921116423498 acres
'11036-695', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 12, 1.06559610720301 acres
'11036-696', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 12, 23.0679742710827 acres
'11036-694', KRUEGER, JAMES C; KRUEGER, ROXANNE A, 13, 0.241409161519601 acres
'11036-695', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 13, 14.7296287082814 acres
'11036-696', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 13, 1.03821835440415 acres
'11036-695', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 20, 0.00641970747483619 acres
'11036-696', JAMES C & ROXANNE A KRUEGER JOINT REVOCABLE TRUST, 20, 11.3869061030862 acres
'11036-686', BARDEN, LAURENCE J, 21, 14.4630901200305 acres
'11036-688', BARDEN, LAURENCE J, 21, 6.95522157363705 acres
'11036-685', BARDEN, JUDITH; BARDEN, LEE E, 22, 0.297910233502946 acres
'11036-710', PROCHNOW, DAVID; PROCHNOW, SHARON, 22, 24.1501407866183 acres
'11036-711', BARDEN, JUDITH; BARDEN, LEE E, 22, 0.00243166573461187 acres
'11018-560', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_12_0, 6.17972976958466 acres
'11018-561', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_12_0, 18.5463240795976 acres
'11018-561', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_13_1, 13.2388826252836 acres
'11018-564', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_13_1, 2.47958698404386 acres
'11018-559', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_11_2, 11.2373350492003 acres
'11018-559', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_10_3, 1.67803054013305 acres
'11018-560', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_10_3, 5.64641149120389 acres
'11018-560', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_09_4, 5.02505431615542 acres
'11018-559', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_08_5, 0.608788993532033 acres
'11018-560', REGENTS OF UNIVERSITY OF WISCONSIN, RepeatName_08_5, 1.25044280269777 acres
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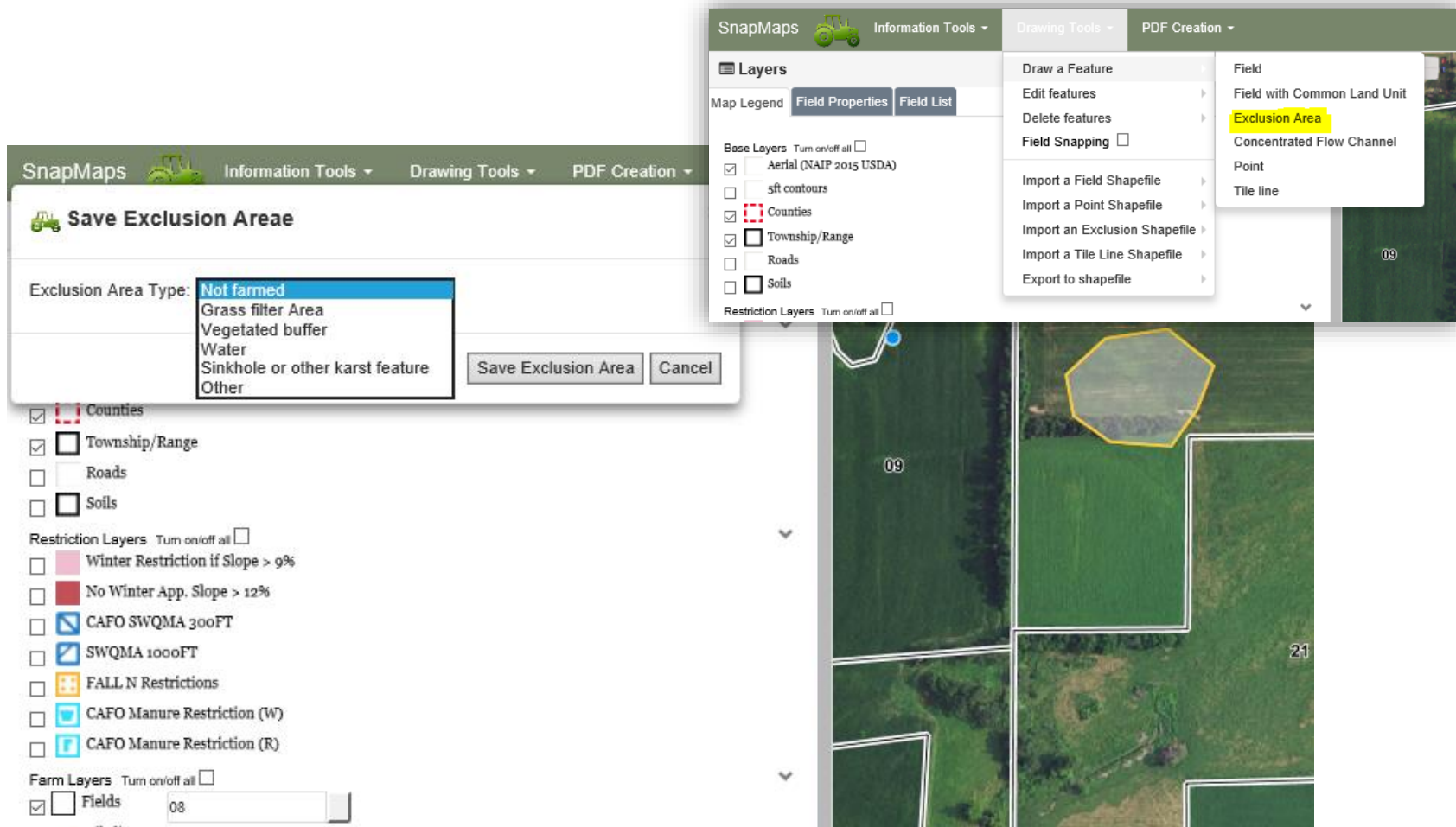
# Helpful Tools

Measure tools.



# Draw other features

Exclusion areas.



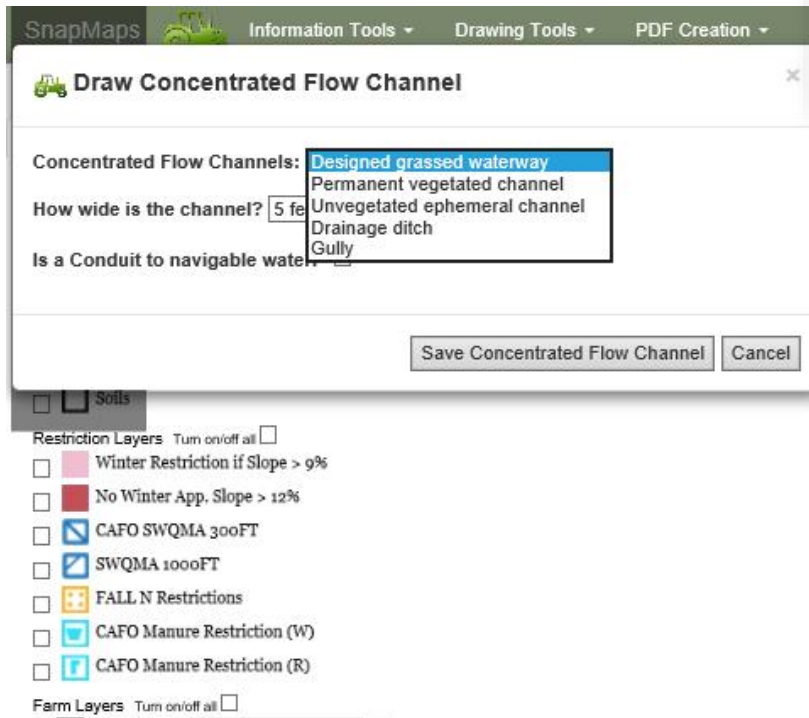
The screenshot displays the SnapMaps software interface. On the left, the 'Save Exclusion Area' dialog is open, showing the 'Exclusion Area Type' dropdown menu with options: 'Not farmed' (selected), 'Grass filter Area', 'Vegetated buffer', 'Water', 'Sinkhole or other karst feature', and 'Other'. Below this, there are checkboxes for 'Base Layers' (Aerial, 5ft contours, Counties, Township/Range, Roads, Soils) and 'Restriction Layers' (Winter Restriction if Slope > 9%, No Winter App. Slope > 12%, CAFO SWQMA 300FT, SWQMA 1000FT, FALL N Restrictions, CAFO Manure Restriction (W), CAFO Manure Restriction (R)). At the bottom, there are 'Farm Layers' (Fields) and a 'Save Exclusion Area' button.

On the right, the 'Drawing Tools' menu is open, showing options: 'Draw a Feature', 'Edit features', 'Delete features', 'Field Snapping', 'Import a Field Shapefile', 'Import a Point Shapefile', 'Import an Exclusion Shapefile', 'Import a Tile Line Shapefile', and 'Export to shapefile'. The 'Draw a Feature' submenu is also visible, showing options: 'Field', 'Field with Common Land Unit', 'Exclusion Area' (highlighted), 'Concentrated Flow Channel', 'Point', and 'Tile line'.

The background shows a map view with a yellow polygon representing an exclusion area on a green field. The map includes labels for '09' and '21'.

# Draw other features

Concentrated flow channels.



**SnapMaps** Information Tools Drawing Tools PDF Creation

**Draw Concentrated Flow Channel**

Concentrated Flow Channels: **Designed grassed waterway**  
 Permanent vegetated channel  
 Unvegetated ephemeral channel  
 Drainage ditch  
 Gully

How wide is the channel? 5 feet

Is a Conduit to navigable water? ☐

Save Concentrated Flow Channel Cancel

**Layers**

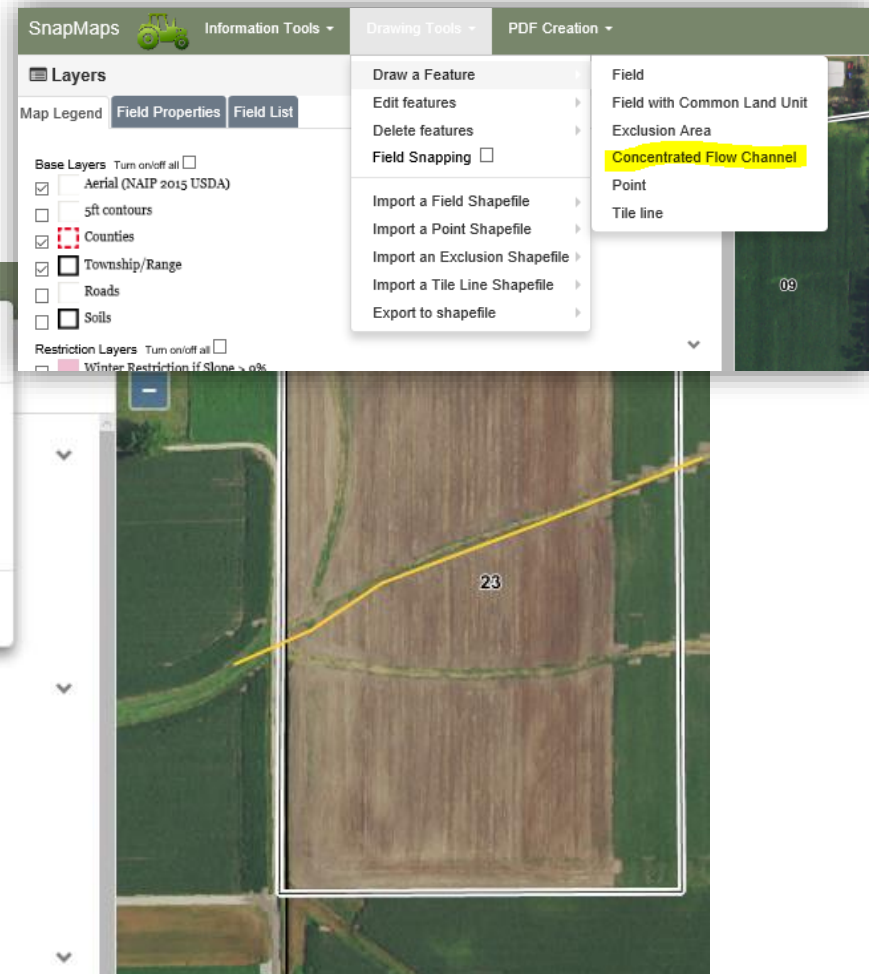
Base Layers Turn on/off all ☐

- ☒ Aerial (NAIP 2015 USDA)
- ☐ 5ft contours
- ☒ Counties
- ☒ Township/Range
- ☐ Roads
- ☐ Soils

Restriction Layers Turn on/off all ☐

- ☐ Winter Restriction if Slope > 9%
- ☐ No Winter App. Slope > 12%
- ☐ CAFO SWQMA 300FT
- ☐ SWQMA 1000FT
- ☐ FALL N Restrictions
- ☐ CAFO Manure Restriction (W)
- ☐ CAFO Manure Restriction (R)

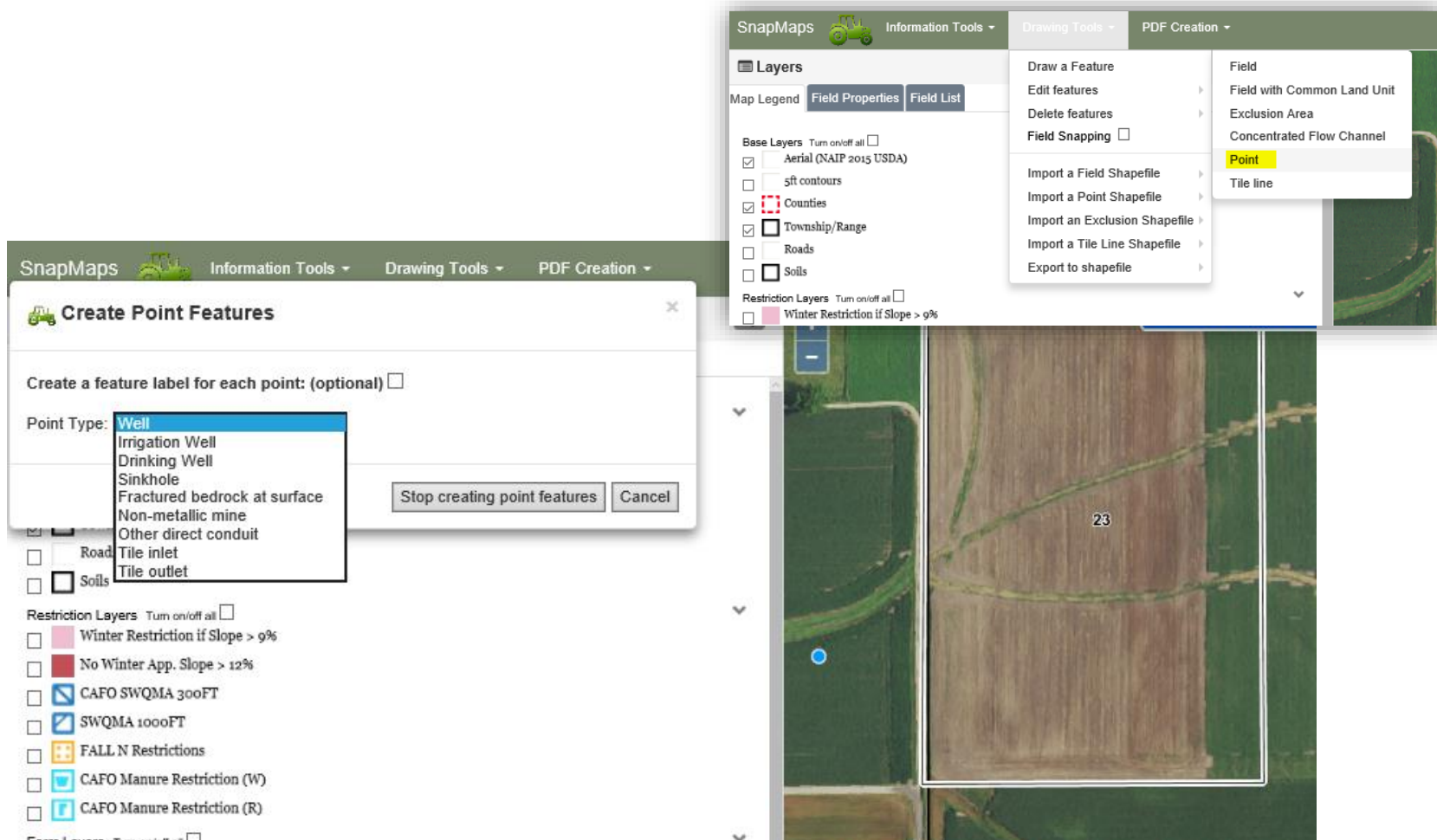
Farm Layers Turn on/off all ☐





# Draw other features

Point features.



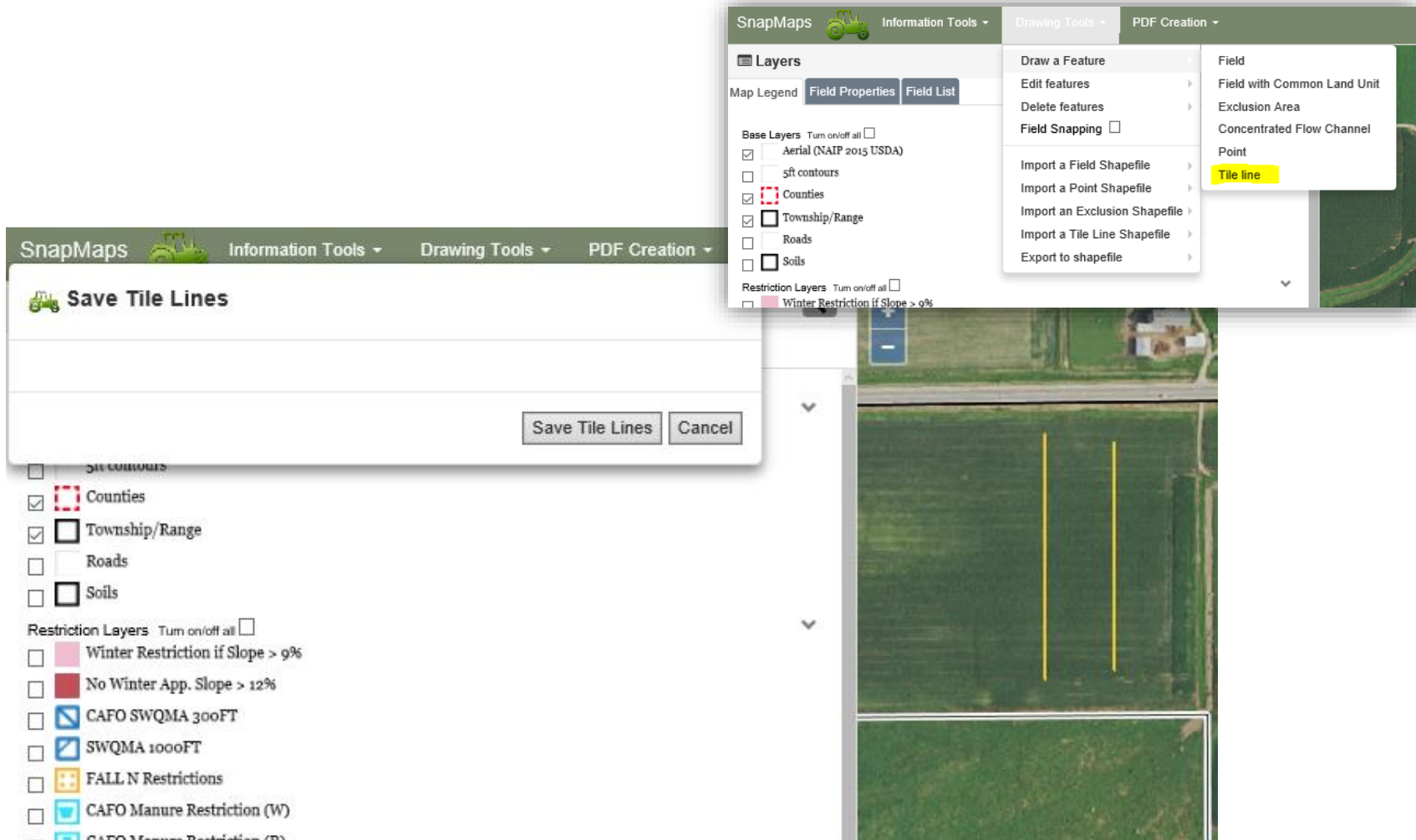
The screenshot displays the SnapMaps software interface. The top navigation bar includes 'SnapMaps', 'Information Tools', 'Drawing Tools', and 'PDF Creation'. The 'Drawing Tools' menu is open, showing options like 'Draw a Feature', 'Edit features', 'Delete features', 'Field Snapping', and 'Import a Field Shapefile'. The 'Point' option is highlighted under the 'Field' category.

The 'Create Point Features' dialog box is open, showing the 'Point Type' dropdown menu with options: 'Well', 'Irrigation Well', 'Drinking Well', 'Sinkhole', 'Fractured bedrock at surface', 'Non-metallic mine', 'Other direct conduit', 'Tile inlet', and 'Tile outlet'. The 'Well' option is selected. The dialog also includes checkboxes for 'Create a feature label for each point: (optional)', 'Road', 'Soils', and 'Restriction Layers'. The 'Restriction Layers' section includes options like 'Winter Restriction if Slope > 9%', 'No Winter App. Slope > 12%', 'CAFO SWQMA 300FT', 'SWQMA 1000FT', 'FALL N Restrictions', 'CAFO Manure Restriction (W)', and 'CAFO Manure Restriction (R)'. The 'Stop creating point features' and 'Cancel' buttons are visible at the bottom of the dialog.

The background map shows an aerial view of a field with a blue dot indicating the location of a point feature. The map also displays various layers like 'Aerial (NAIP 2015 USDA)', '5ft contours', 'Counties', 'Township/Range', 'Roads', and 'Soils'.

# Draw other features

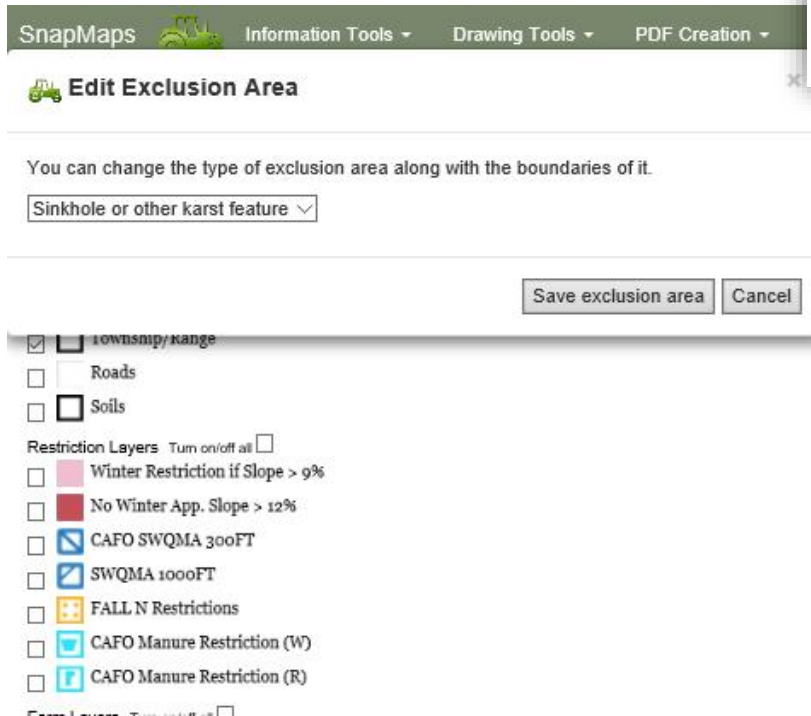
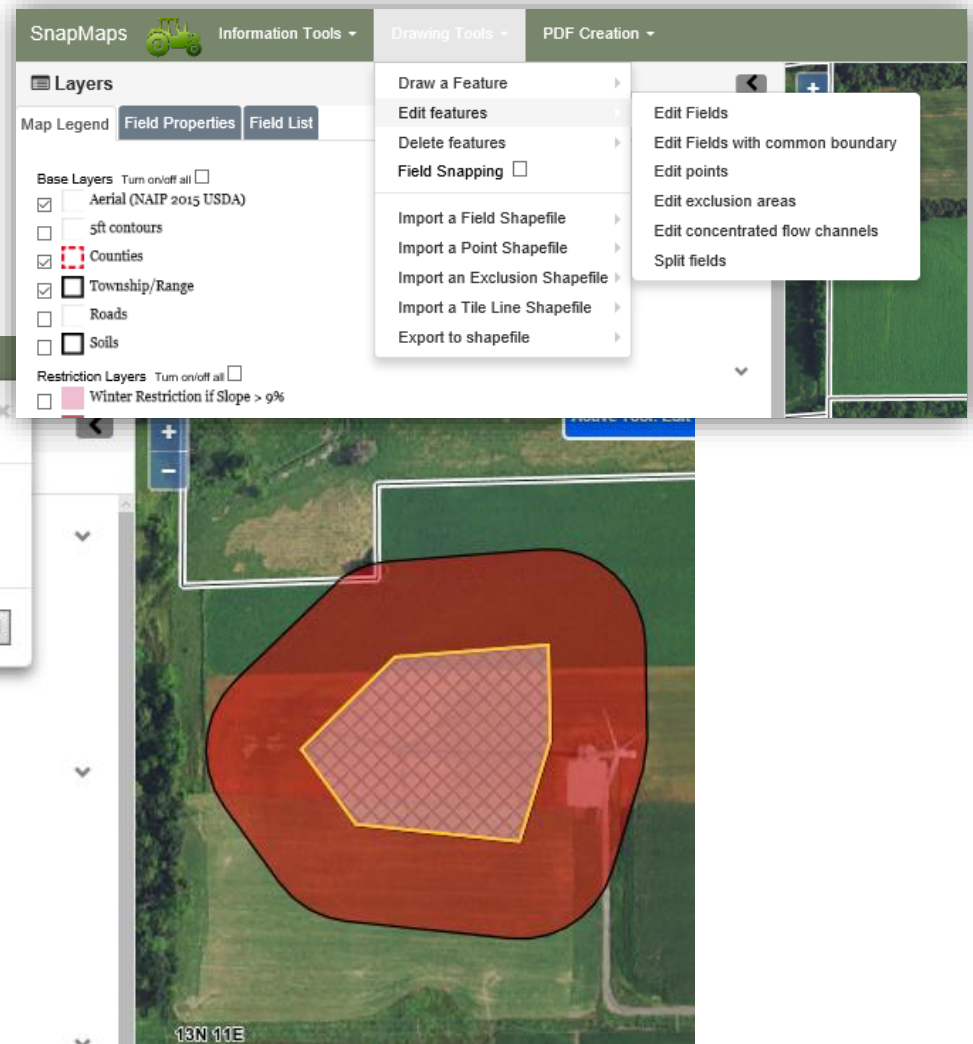
Tile lines.



The screenshot displays the SnapMaps software interface. At the top, there is a navigation bar with tabs: SnapMaps, Information Tools, Drawing Tools, and PDF Creation. Below this, a 'Layers' panel is visible on the left, showing a list of map layers with checkboxes. The 'Base Layers' section includes 'Aerial (NAIP 2015 USDA)', '5ft contours', 'Counties', 'Township/Range', 'Roads', and 'Soils'. The 'Restriction Layers' section includes 'Winter Restriction if Slope > 9%', 'No Winter App. Slope > 12%', 'CAFO SWQMA 300FT', 'SWQMA 1000FT', 'FALL N Restrictions', 'CAFO Manure Restriction (W)', and 'CAFO Manure Restriction (R)'. A 'Save Tile Lines' dialog box is open in the foreground, with a 'Save Tile Lines' button and a 'Cancel' button. On the right, the 'Drawing Tools' menu is open, showing options like 'Draw a Feature', 'Edit features', 'Delete features', 'Field Snapping', 'Import a Field Shapefile', 'Import a Point Shapefile', 'Import an Exclusion Shapefile', 'Import a Tile Line Shapefile', and 'Export to shapefile'. The 'Tile line' option is highlighted in yellow. The background shows an aerial map with two vertical yellow lines drawn on a green field.

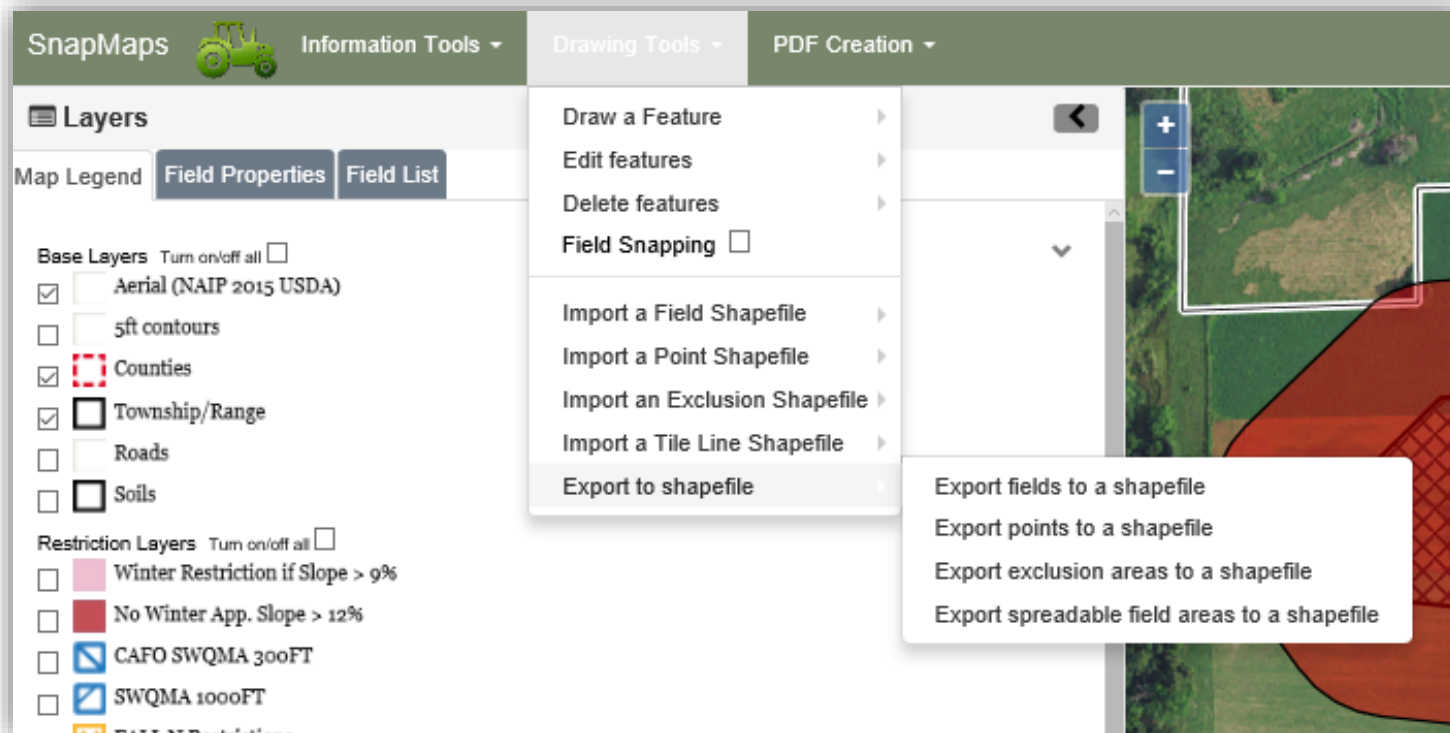
# Edit features

Edit all features except tile lines. You can edit the feature type and geography.



# Export features as a shapefile

Export fields, point features, exclusion areas and spreadable acres to shapefiles.






# SnapPlus Desktop

- Snap Maps Screen
  - Control buttons added and moved
  - Importing field data
  - Protect manually entered slopes and slope lengths
  - SnapMap Acres
- Short-cuts
- The main menus have a different look.
- The main screen tab order has changed to follow the workflow.
- Fields Screen
  - Prevent overwriting manually entered field slope and slope lengths.
- Easy Group Builder

# Main Tabs



**Subfarm:** Show all fields. ▾ \*

**Field:** 10 ▾

**Farm name:** Samp


**Group:** Show all fields. ▾


⏮ ⏪ ⏩ ⏭


**Location:** C:\SnapPlus


Farm | Soil Tests | **Snap Maps** | Fields | Nutrients | Cropping | Daily Log | Reports


Set upload preferences


 1. Upload


 2. Website


 3. Download


 Refresh


 Clear My Web Data

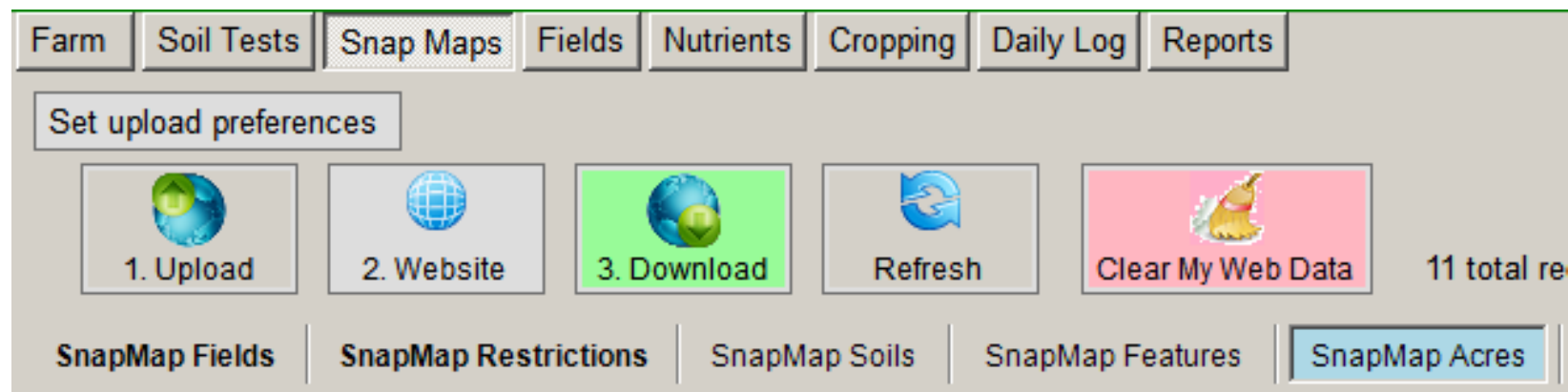
11 total records.

SnapMap Fields | SnapMap Restrictions | SnapMap Soils | SnapMap Features | **SnapMap Acres**

# SnapMaps

## Buttons added and moved


- Set Preferences: Select additional data to be sent to SnapMaps for thematic maps.
- Clear My Web Data: Remove my data from the web without affecting my data on the desktop.
  - Make sure you've downloaded your changes first.
  - You will have to upload before you go to the map next time.





# Import field data


- Orange rows are different than those on the fields screen
- Orange cells will be imported and overwrite field data.
- Manually entered data does not show orange (8.5 and 141)
- Ctrl-Click
  - Toggle individual cells on or off
  - Toggle entire row or column on or off
- Refresh will restore the originally colored cells


Set upload preferences

  
**1. Upload**

  
**2. Website**

  
**3. Download**

  
**Refresh**

  
**Clear My Web Data**

10 total records.

SnapMap Fields

SnapMap Restrictions

SnapMap Soils

SnapMap Features

SnapMap Acres

ALL	E x i s t s	Subfarm	Field Name	Field County	Field Acres	Soil Map Symbol (critical)	Soil Map Symbol (predominant)	Slope	Slope Length	Below Field Slope To Water	Distance To Perennial Water
▶	Yes	West	08	Columbia	75.4	SaC2	PnA	9	150	6.1 - 12	301 - 1000
	Yes	West	09	Columbia	11.4	SaB2	GeB	4	200	6.1 - 12	301 - 1000
	Yes	Home	10	Columbia	15.7	SaC2	SaB2	8.5	141	2.1 - 6	301 - 1000
	Yes	East	11	Columbia	20.2	SaC2	SaB2	10	150	6.1 - 12	301 - 1000
	Yes	East	12	Columbia	24.3	SaC2	SaB2	9	12	The field slope soil is 21.12	0 - 300
	Yes	East	13	Columbia	15.3	SaE	SnD2	25	60	2.1 - 6	301 - 1000

# Distance and slope to water

- Automated calculations of distance and slope to perennial water.
- Distance is as crow flies. The distance calculation is a rough estimate.
- You can override the values if you have field verified.

SnapMap Fields   SnapMap Restrictions   SnapMap Soils   SnapMap Features   SnapMap Acres											
A L L	E x i s t s	Subfarm	Field Name	Field County	Field Acres	Soil Map Symbol (critical)	Soil Map Symbol (predominant)	Slope	Slope Length	Below Field Slope To Water	Distance To Perennial Water
▶	Yes	West	08	Columbia	75.4	SaC2	PnA	9	150	6.1 - 12	301 - 1000
	Yes	West	09	Columbia	11.4	SaB2	GeB	4	200	6.1 - 12	301 - 1000
	Yes	Home	10	Columbia	15.7	SaC2	SaB2	10	150	2.1 - 6	301 - 1000
	Yes	East	11	Columbia	20.2	SaC2	SaB2	10	150	6.1 - 12	301 - 1000
	Yes	East	12	Columbia	24.3	SaC2	SaB2	9	150	6.1 - 12	0 - 300
	Yes	East	13	Columbia	15.3	SaE	SnD2	25	60	2.1 - 6	301 - 1000
	Yes		20	Columbia	11.4	SaC2	SaC2	10	150	2.1 - 6	301 - 1000
	Yes		21	Columbia	21.1	SaB2	PnB	4	200	0 - 2	301 - 1000
	Yes		22	Columbia	24.2	RdC2	PnB	9	150	0 - 2	1001 - 5000



# Field Screen

## Manually entered slope and slope length

- If you change the default values for either the slope or slope length, selecting a different dominant critical soil will not overwrite those values.
- Those values will not show up as different on the SnapMaps Fields tab.

Columbia	CaE2	▼	CHANN...	CaE2	▼	CHANN...	8.5	141
Columbia	CaE2	▼	CHANN...	CaE2	▼	CHANN...	21	80

# Selects Field Soils Automatically

- Gives the percentage of each in your field.

SnapMap Fields	SnapMap Restrictions	SnapMap Soils	SnapMap Features	SnapMap Acres											
	Subfarm Name	County	Field Name	Map Symbol	Slope	Slope Length	% of field	Soil Group	Yield Potential	K	T	ES	Fall N Restriction	Manure Restriction CAFO	Notes
►	West	Columbia	08	PnA	1	250	82.9	L	H	0.37	5	0.0126			
	West	Columbia	08	SaB2	4	200	9.2	L	H	0.43	5	0.0454			
	West	Columbia	08	SaA	1	250	6.9	L	H	0.37	5	0.0126			

# Critical and Predominant Soils

- Automatically determines the critical and predominant soils.
- You can override the values if you have field verified.

SnapMap Fields   SnapMap Restrictions   SnapMap Soils   SnapMap Features   SnapMap Acres													
ALL	Exist	Subfarm	Field Name	Field County	Field Acres	Soil Map Symbol (critical)	Soil Map Symbol (predominant)	Slope	Slope Length	Below Field Slope To Water	Distance To Perennial Water	Notes	Field Borders
▶	Yes	West	08	Columbia	77.2	PnA	PnA	9	250	2.1 - 6	301 - 1000		MULTIPOLYGON
	Yes	West	09	Columbia	2.5	WoC2	WoC2	9	150	More than 12	301 - 1000		
	Yes	Home	10	Columbia	7	CaE2	CaE2	21	80	More than 12	0 - 300		
	Yes	East	11	Columbia	8	CaE2	CaE2	21	80	More than 12	301 - 1000		
	Yes	East	12	Columbia	26	SaC2	SaC2	9	150	More than 12	301 - 1000		
	Yes	East	13	Columbia	16	MeC2	MeC2	9	150	6.1 - 12	1001 - 5000		

# Determines Soil Restrictions

- These are based off what was drawn by the user and restrictions in the SnapMaps system.

SnapMap Fields					
SnapMap Restrictions					
SnapMap Soils					
SnapMap Features					
SnapMap Acres					
ALL	Subfarm Name	Field Name	Restriction	Percent	Notes
▶	Owner	1	SWQMA 1000ft	98.75	
	Owner	2	SWQMA 1000ft	100.00	
	Owner	3	SWQMA 1000ft	99.06	
	Owner	4	SWQMA 1000ft	101.11	
	Owner	5	SWQMA 1000ft	99.50	
	Owner	5	Concentrated Flow Channel	0.65	
	Owner	6	SWQMA 1000ft	70.61	
	Owner	6	Winter restriction if slope > 9	18.49	
	Owner	6	Concentrated Flow Channel	0.76	
	Owner	13	SWQMA 1000ft	6.49	
	Owner	14	Well 200 ft	23.60	
	Owner	14	SWQMA 1000ft	22.80	
	Owner	15	Well 200 ft	24.35	
	Owner	16	Well 200 ft	18.37	
	Owner	17	SWQMA 1000ft	47.30	
	Owner	17	Well 200 ft	10.81	
	Owner	18	Well 200 ft	8.54	
	Owner	32	Concentrated Flow Channel	0.67	
	Owner	33	SWQMA 1000ft	1.11	
	Owner	33	Concentrated Flow Channel	0.25	
	Owner	34	SWQMA 1000ft	47.06	
	Owner	34	Concentrated Flow Channel	0.24	
	Owner	35	SWQMA 1000ft	63.43	
	Owner	36	SWQMA 1000ft	65.17	
	Owner	37	SWQMA 1000ft	100.87	
	Owner	37	Well 200 ft	6.96	

'Import to SnapPlus' will only import data from the selected cells. To toggle the selected state 'Ctrl-Click' on a cell, row or column.

# SnapMap Acres

- **Field Name:** The field name from the fields tab.
- **Field Acres:** The total acres minus any water and exclusion areas.
- **Total (map):** Total acres inside the field boundary.
- **Spreadable 25 ft:** Acres that may receive manure outside the 25 ft spreading restricted features.
- **Not Spreadable 25 ft:** Acres that can not receive manure within 25 ft of restricted spreading features.
- **SWQMA Spreadable 25 ft:** Acres within a SWQMA that may receive manure outside the 25 ft spreading restricted features.
- **Spreadable 100 ft:** Acres that may receive manure outside the 100 ft spreading restricted features - *based on SWQMA manure application strategy.*
- **Not Spreadable 100 ft:** Acres that can not receive manure within 100 ft of restricted spreading features - *based on SWQMA manure application strategy.*

SnapMap Fields   SnapMap Restrictions   SnapMap Soils   SnapMap Features <b>SnapMap Acres</b>								
The <b>Spreadable</b> and <b>SWQMA Spreadable</b> columns below refer to acres for the no applications within 25 or 100 ft <b>SWQMA Manure Application Strategies</b> .								
For both annual and perennial crops: <b>No applications within 25 ft; inject or immediately incorporate in rest of SWQMA.</b>								
	Field Name	Field Acres	Total (map)	Spreadable 25 ft	Not Spreadable 25 ft	SWQMA Spreadable 25 ft	Spreadable 100 ft	Not Spreadable 100 ft
►	08	75.4	77.9	65.9	9.5	18.2	65.9	9.5
	09	11.4	11.5	8.5	2.9	6.3	8.5	2.9
	10	15.7	16.1	15.7	0	11.2	15.7	0
	11	20.2	21	19.2	1	5.4	16.4	3.8
	12	24.3	25.5	23.6	0.8	4.8	21.2	3.1
	13	15.3	16	13.9	1.4	13.8	10.1	5.2
	20	11.4	11.4	11.4	0	0.1	11.4	0
	21	21.1	21.4	19.3	1.8	19.2	14.4	6.7
	22	24.2	24.4	23.5	0.7	10.8	20.5	3.7
	test	75.1	75.1	75.1	0	0	75.1	0
	<b>Σ Totals</b>	<b>294.1</b>	<b>300.3</b>	<b>276.1</b>	<b>18.1</b>	<b>89.8</b>	<b>259.2</b>	<b>34.9</b>




# SnapMap Acres

SnapMap Fields   SnapMap Restrictions   SnapMap Soils   SnapMap Features   <b>SnapMap Acres</b>								
The <b>Spreadable</b> and <b>SWQMA Spreadable</b> columns below refer to acres for the no applications within 25 or 100 ft <b>SWQMA Manure Application Strategies</b> .								
For both annual and perennial crops: <b>No applications within 25 ft; inject or immediately incorporate in rest of SWQMA.</b>								
	Field Name	Field Acres	Total (map)	Spreadable 25 ft	Not Spreadable 25 ft	SWQMA Spreadable 25 ft	Spreadable 100 ft	Not Spreadable 100 ft
►	08	75.4	77.9	65.9	9.5	18.2	65.9	9.5
	09	11.4	11.5	8.5	2.9	6.3	8.5	2.9
	10	15.7	16.1	15.7	0	11.2	15.7	0
	11	20.2	21	19.2	1	5.4	16.4	3.8
	12	24.3	25.5	23.6	0.8	4.8	21.2	3.1
	13	15.3	16	13.9	1.4	13.8	10.1	5.2
	20	11.4	11.4	11.4	0	0.1	11.4	0
	21	21.1	21.4	19.3	1.8	19.2	14.4	6.7
	22	24.2	24.4	23.5	0.7	10.8	20.5	3.7
	test	75.1	75.1	75.1	0	0	75.1	0
	<b>Σ Totals</b>	<b>294.1</b>	<b>300.3</b>	<b>276.1</b>	<b>18.1</b>	<b>89.8</b>	<b>259.2</b>	<b>34.9</b>

# Short-cuts

SnapPlus Beta 16.0 built on 2016-08-23 - Columbia Sample Farm

File Import/Export Tools View Help   Save snapshot

 Subfarm: Show all fields. \* Field: 08 Farm name: SampleFarmV2.snapDb  
 Group: Show all fields. Location: D:\Development\trunk\Training

Navigation buttons: << < > >>

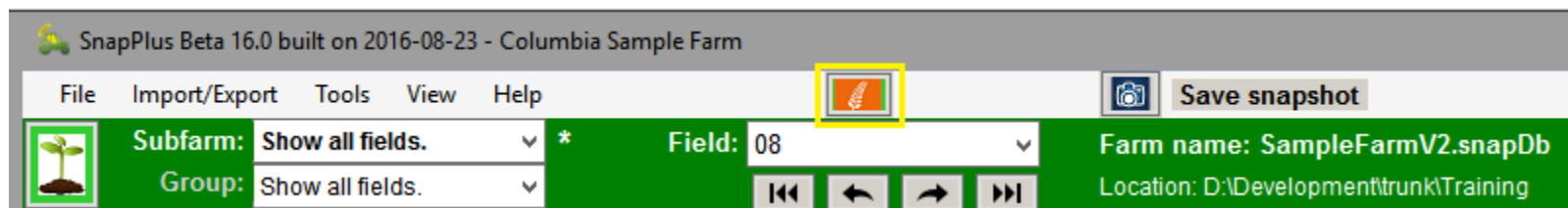
2016			2017		
Alfalfa/Brome Seeding S			Alfalfa/Brome		
2.6-3.5			4.6-5.5		
Fall Chisel, no disk			None		
2013-10-30			2013-10-30		
NOT MET			NOT MET		
<input type="checkbox"/> Irrigated			<input type="checkbox"/> Irrigated		
N	P2O5	K2O	N	P2O5	K2O
0	0	180	0	0	300
-	165	130	-	270	210
0	0	50	0	0	90
0	-	-	0	-	-
20	-	-	36	-	-
105	105	260	0	0	0
0	0	0	0	0	0
125	105	260	36	0	0
125	105	210	36	0	-90

Field Name	Soil Symbol	Crop	Yield Goal	
08	SaC2	Alfalfa/Brome	4.6-5.5	
09	WoC2	Alfalfa/Brome	4.6-5.5	
10	CaE2	Alfalfa/Brome	4.6-5.5	
11	CaE2	Corn grain	151-170	
12	SaC2	Corn silage	10-15	
13	MeC2	Corn grain	151-170	




Toggles Cropping Grid View on and off


# Short-cuts



Pulls up Nutrient Applications by Season table

 **Nutrient Applications by Season** ? x

Start crop year:  No. of years:

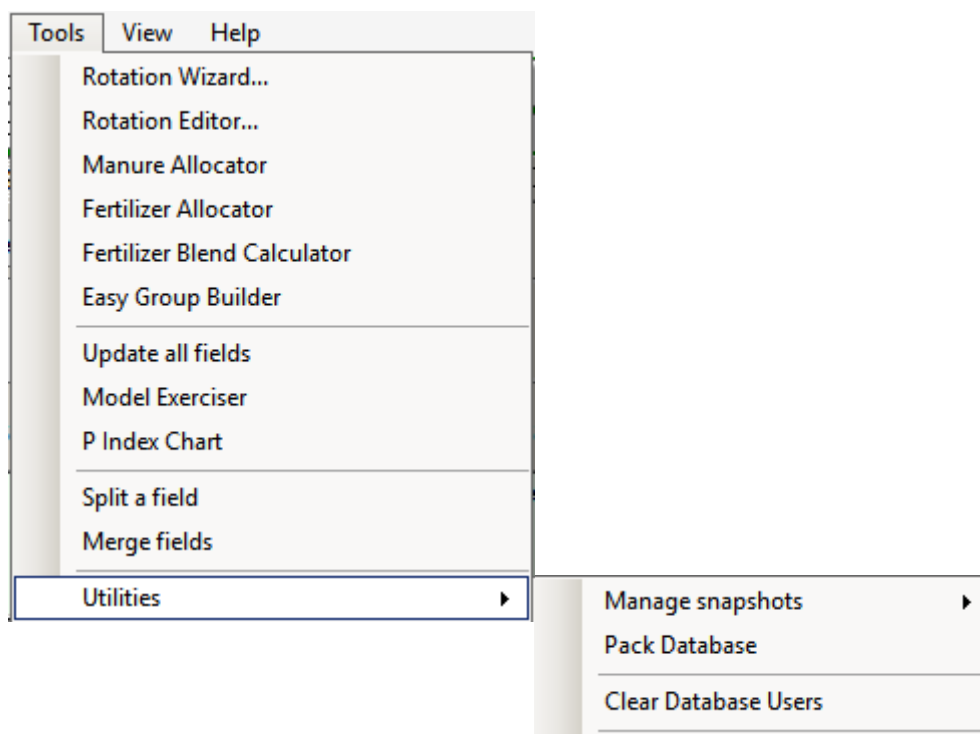
 'Refresh' after changing any applications.

Crop Year	Nutrient Type	Source Name	Fall	Winter	Spring	Summer	Grazing	Available	Applications	Remaining
2017	Manure	Pit Manure Dairy slurry	0	0	260,000	0	0	180,000	260,000	-80,000
2017	Manure	Solid Dairy Manure	160	0	0	0	0	250	160	90
2017	Grazing	Graze	0	0	0	0	150	0	150	0

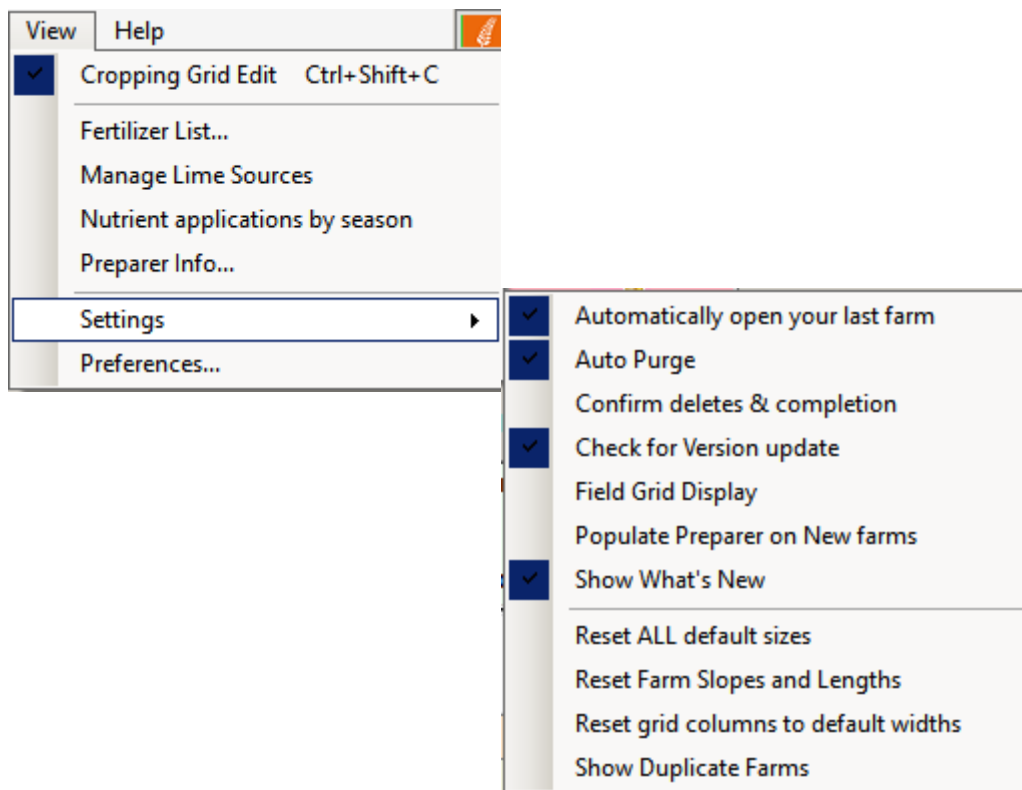
Close Display options

☒ Manure
 ☒ Grazing
 ☐ Biosolids
 ☐ Fertilizer

# Main Menu - Tools



# Main Menu - View





# Easy Group Builder

It's now easier than ever before to put your fields into groups

**SnapPlus - Group Builder**

**Group Builder**

Choose your criteria:

- ☐ Field Information
- ☐ Field Spreadable Acres
- ☒ Field Restrictions
  - ☒ High N Leaching Potential Soil Code
  - ☒ Field in 590 SWQMA
  - ☒ Concentrated Flow Channel
  - ☒ Winter App. Slope Restrictions
  - ☐ CAFO W/R Soils (Manure Restriction)
  - ☐ Field in CAFO SWQMA
- ☐ Groups
- ☐ Fertilizer Applications
- ☐ Manure Applications
- ☐ Crop Management

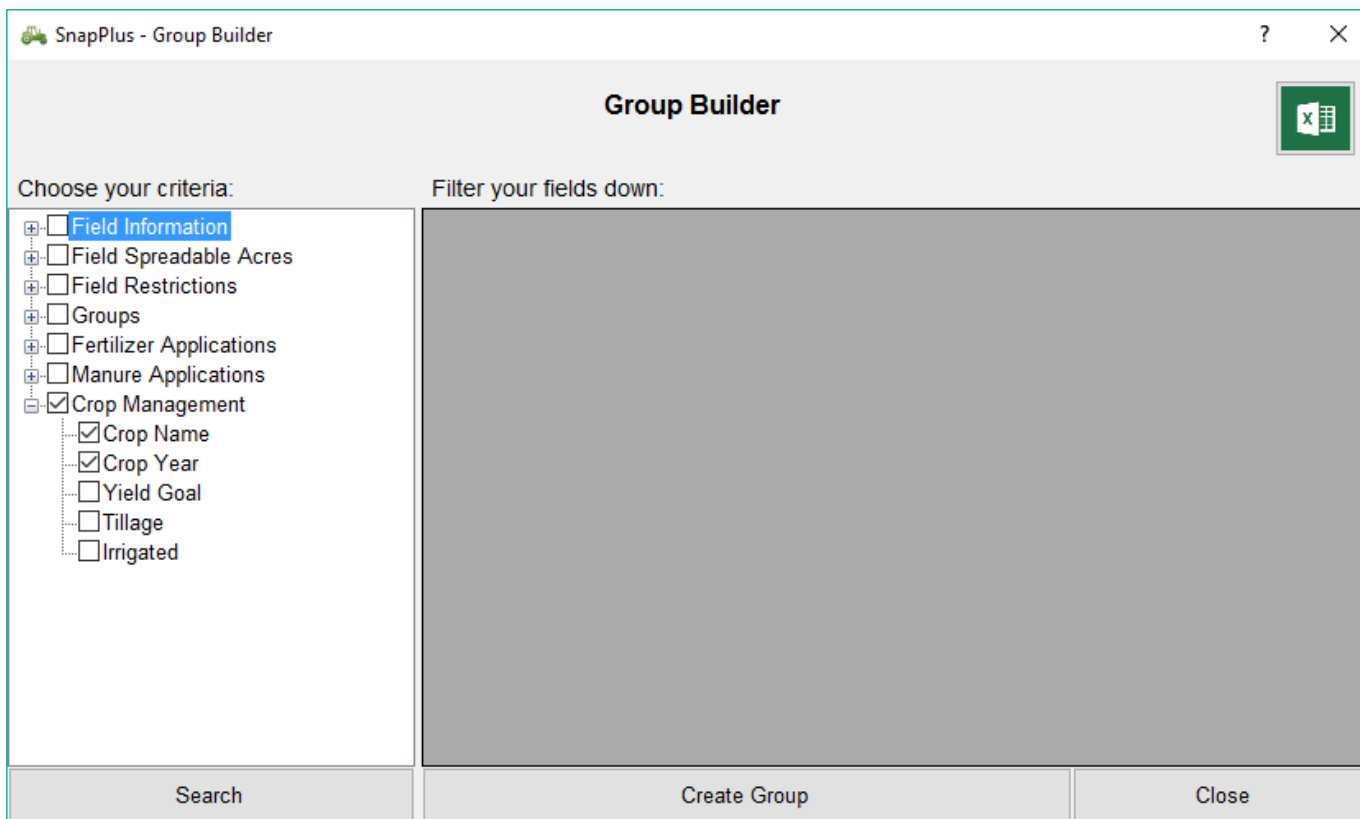
Filter your fields down:

	Field Name	High N Leaching Potential Soil Code	Field in 590 SWQMA	Concentrated Flow Channel	Winter App. Slope Restrictions
▶	08	P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	09	P	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	10		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	11	P	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	13		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Search      Create Group      Close

# Easy Group Builder

Select your criteria from the left and search



The screenshot shows a software window titled "SnapPlus - Group Builder". The window has a title bar with a question mark and a close button. Below the title bar, the text "Group Builder" is centered. On the right side of the window, there is a green icon with a white 'x' and a grid pattern. The main area of the window is divided into two sections. The left section is titled "Choose your criteria:" and contains a list of criteria with checkboxes. The right section is titled "Filter your fields down:" and is currently empty. At the bottom of the window, there are three buttons: "Search", "Create Group", and "Close".

Group Builder

Choose your criteria:

- ☐ Field Information
- ☐ Field Spreadable Acres
- ☐ Field Restrictions
- ☐ Groups
- ☐ Fertilizer Applications
- ☐ Manure Applications
- ☒ Crop Management
  - ☒ Crop Name
  - ☒ Crop Year
  - ☐ Yield Goal
  - ☐ Tillage
  - ☐ Irrigated

Filter your fields down:

Search Create Group Close

# Easy Group Builder

Choose your filters from the dropdown menus

**SnapPlus - Group Builder**

**Group Builder**

Choose your criteria:

- ☐ Field Information
- ☐ Field Spreadable Acres
- ☐ Field Restrictions
- ☐ Groups
- ☐ Fertilizer Applications
- ☐ Manure Applications
- ☒ Crop Management
  - ☒ Crop Name
  - ☒ Crop Year
  - ☐ Yield Goal
  - ☐ Tillage
  - ☐ Irrigated

Search

Filter your fields down:

Field Name	Crop Name	Crop Year
08	Corn grain	
09	Corn grain	
09	Alfalfa/Brome...	
10	Corn grain	
10	Alfalfa/Brome...	
11	Alfalfa/Brome...	
11	Alfalfa/Brome	
12	Alfalfa/Brome	
12	Alfalfa/Brome	
13	Alfalfa/Brome	
13	Alfalfa/Brome	
08	Alfalfa/Brome	
08	Alfalfa/Brome	
08	Alfalfa/Brome	

Create Group

Sort smallest to largest

Sort largest to smallest

Cancel sort

Clear filter

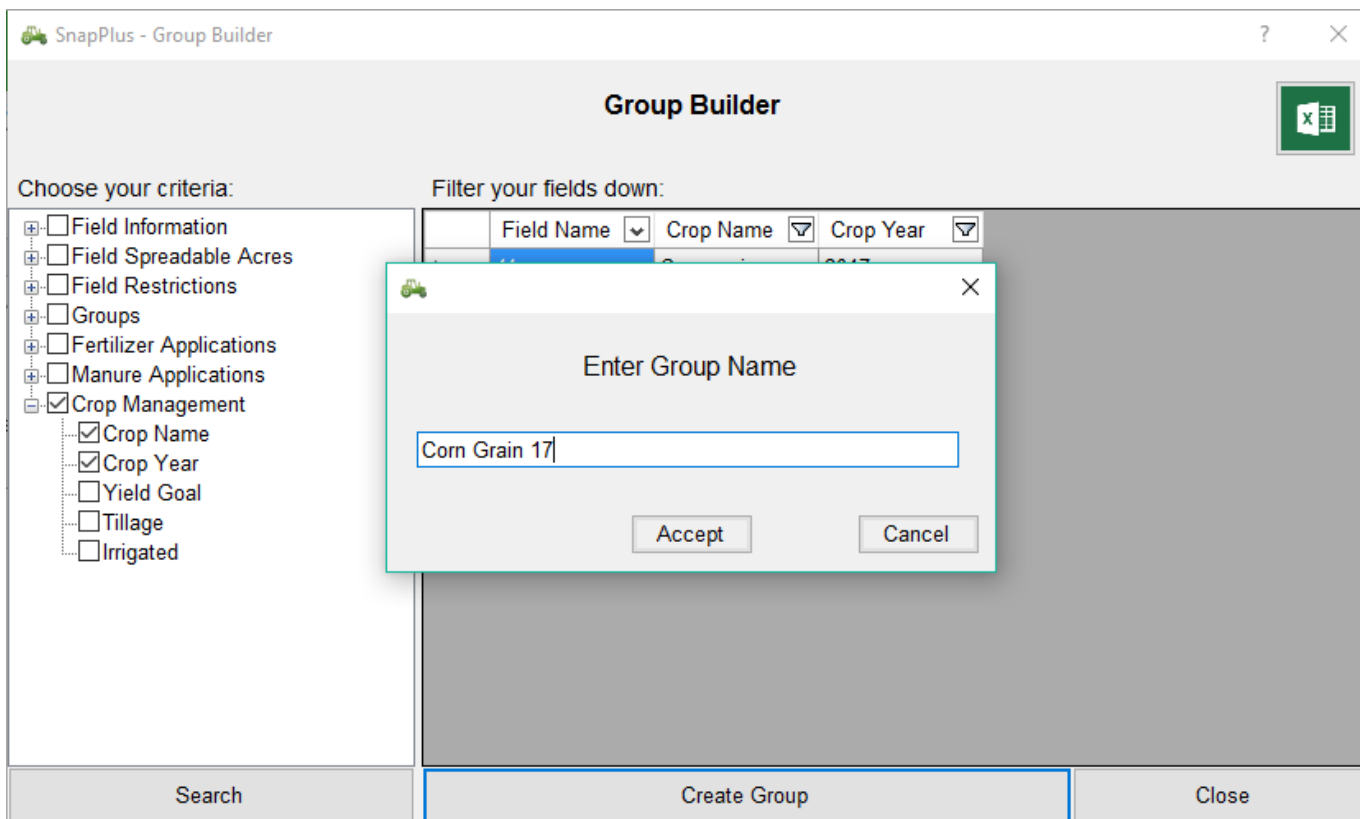
Number filter

- ☒ (Select All)
- ☐ 2013
- ☐ 2014
- ☐ 2015
- ☐ 2016
- ☒ 2017
- ☐ 2018
- ☐ 2019

OK Cancel

# Easy Group Builder

And create your group!



SnapPlus - Group Builder

Group Builder

Choose your criteria:

- ☐ Field Information
- ☐ Field Spreadable Acres
- ☐ Field Restrictions
- ☐ Groups
- ☐ Fertilizer Applications
- ☐ Manure Applications
- ☒ Crop Management
  - ☒ Crop Name
  - ☒ Crop Year
  - ☐ Yield Goal
  - ☐ Tillage
  - ☐ Irrigated

Filter your fields down:

Field Name Crop Name Crop Year

Enter Group Name

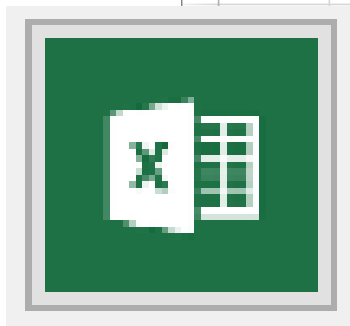
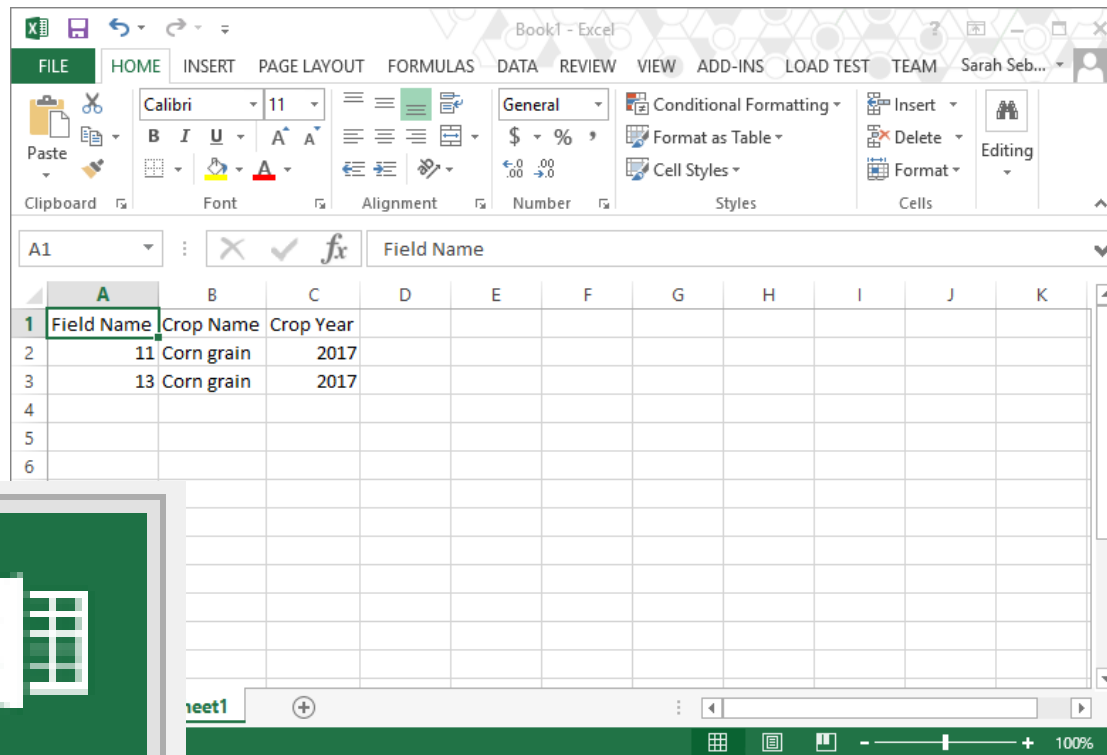
Corn Grain 17

Accept Cancel

Search Create Group Close

# Easy Group Builder


You can also export results to Excel





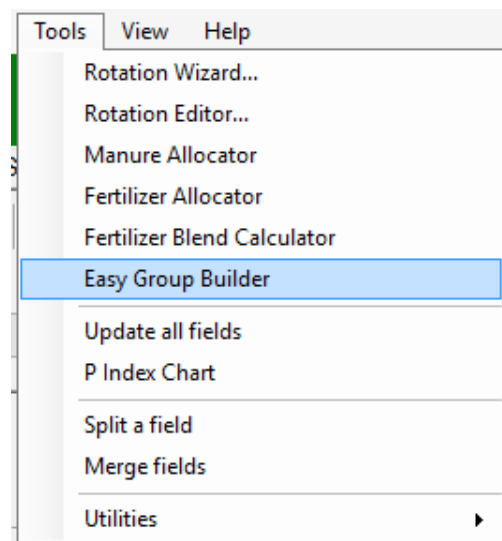
# Easy Group Builder

Get to it from the Group tab on the Fields screen:



Easy Group Builder

or from the Tools menu:



# Thematic maps



# Thematic maps

Limited set of variables to map.

Farm Variables

Crop year: 2016

Select a variable:

--Select a Variable--

Rotational Soil Conditioning Index

Rotation Avg P Index

Rotation Avg Soil loss

Rotational P2O5 Balance

Rotational K2O Balance

On contour

Is Irrigated

Too few soil samples

Soil test too old

N: Over (+)/Under (-) adj UW rec

P2O5: Over (+)/Under (-) adj UW rec

K2O: Over (+)/Under (-) adj UW rec

Expected Spring Residue Cover

Soil Test P

Soil Test K

Soil pH


Legend (Rotation)

(Year 2016)

-3

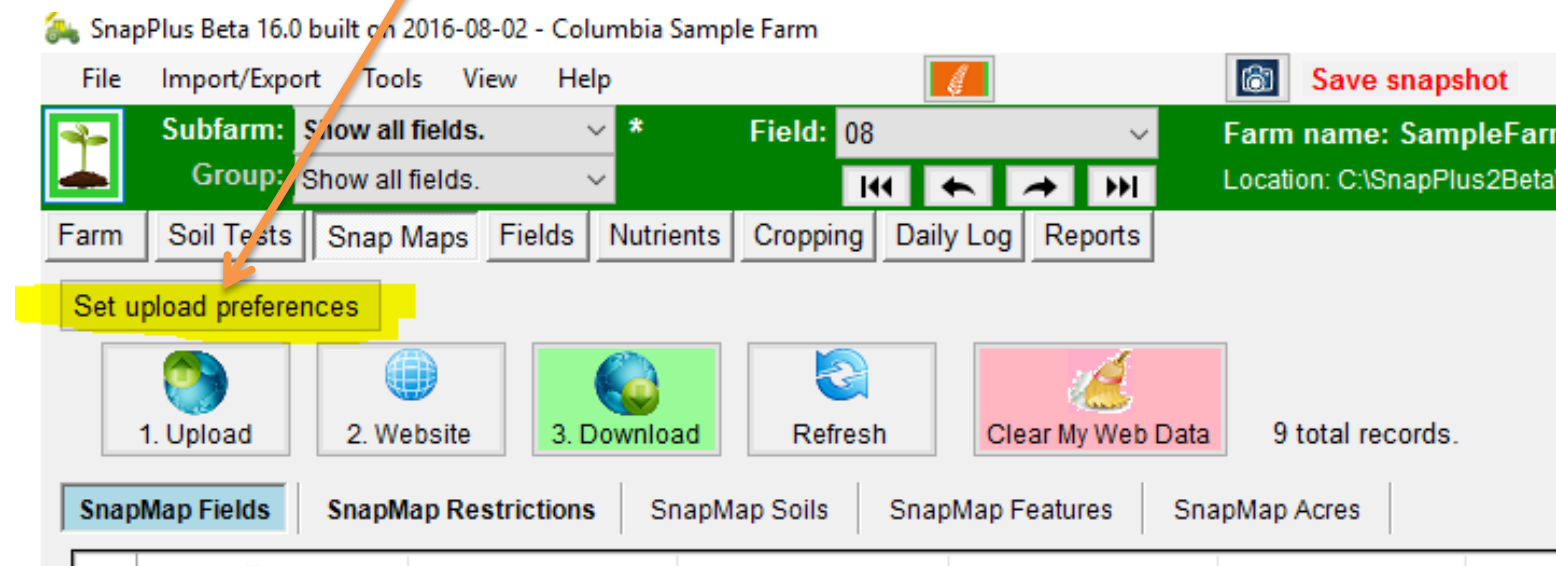
Create PDF Variable

Field Labels



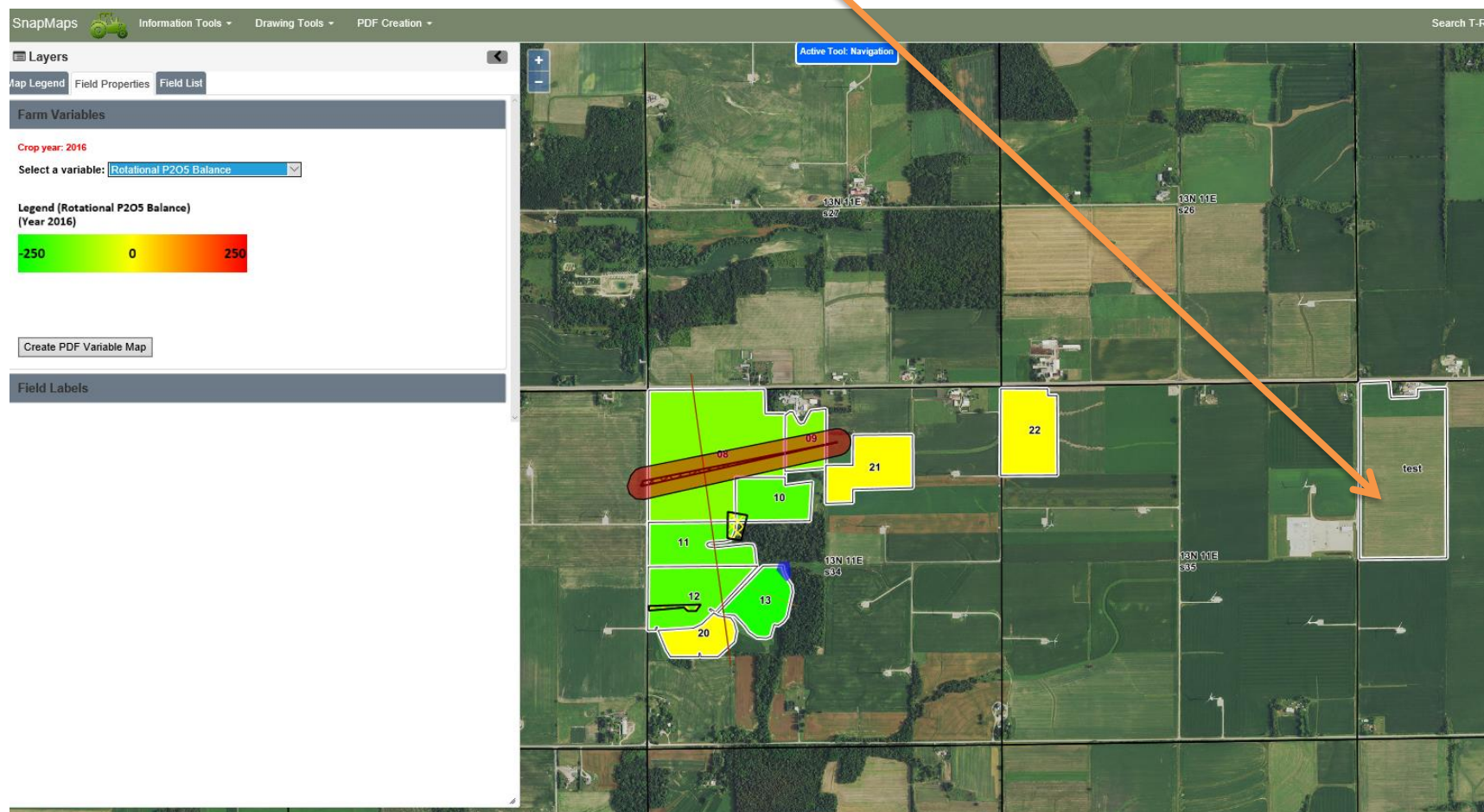
# Thematic maps

You have to set your preferences and upload these data in order to use this tool.



# Thematic maps

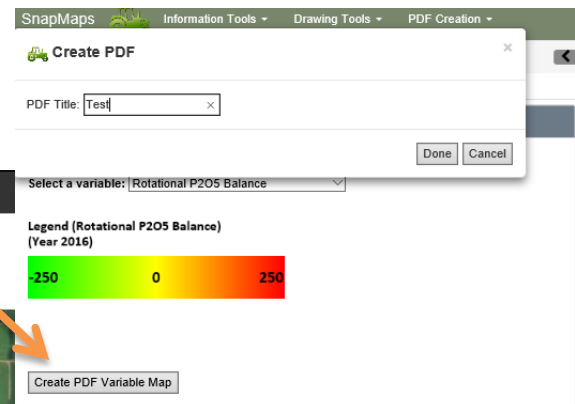
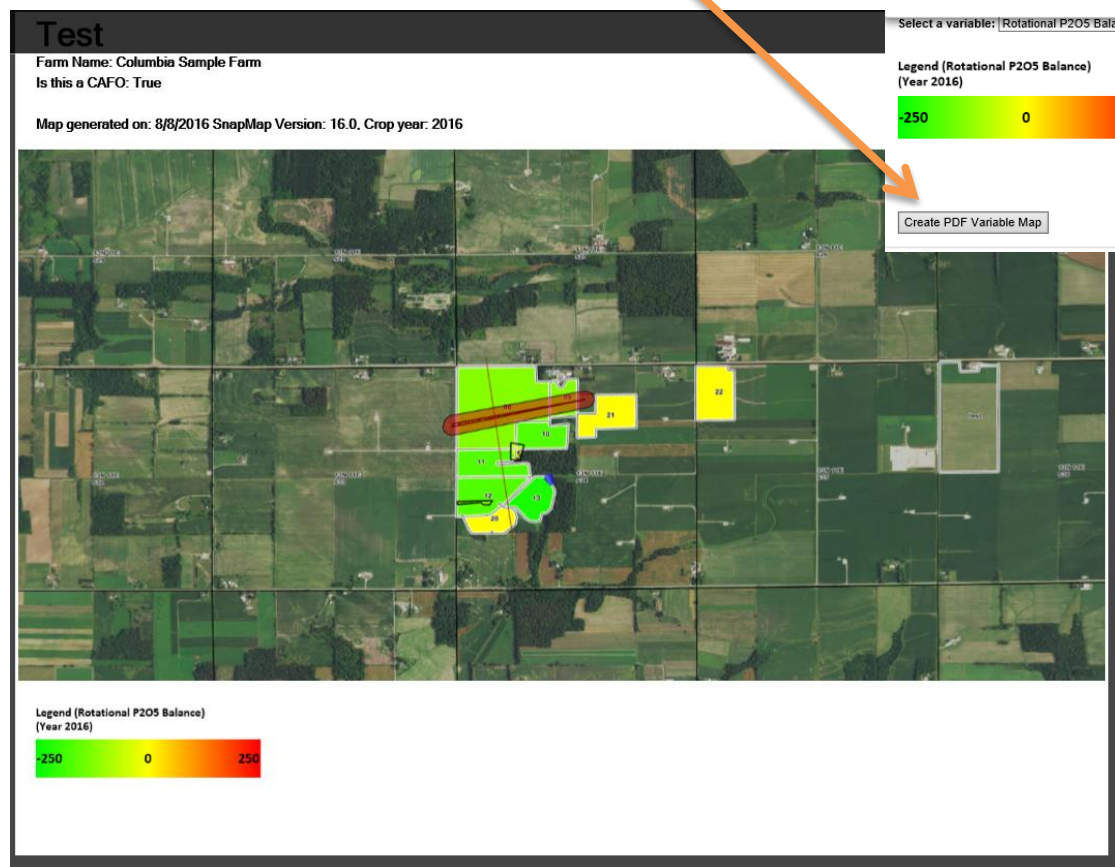
No fill for a field mean no data is available for that field.





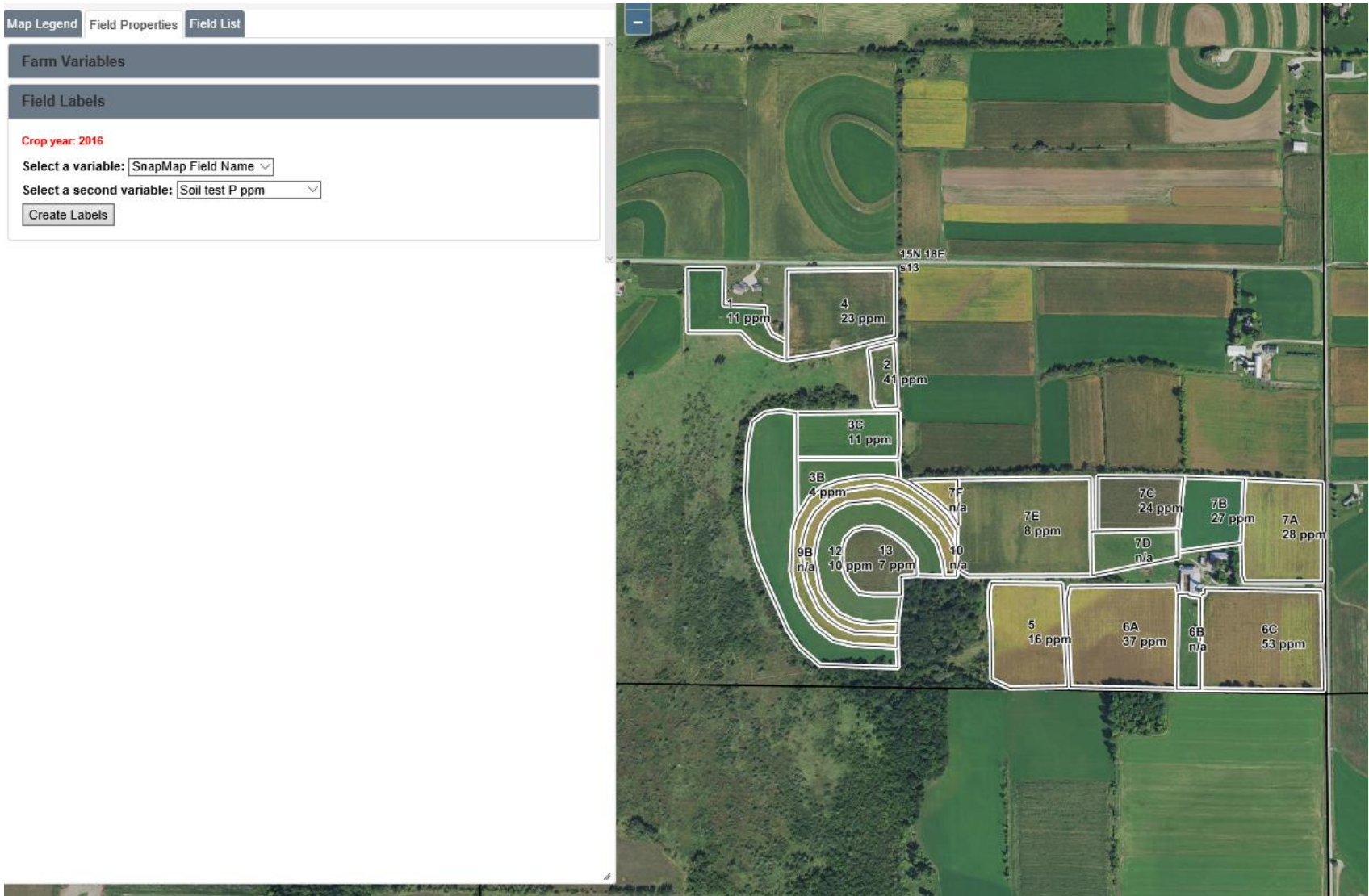
# Thematic maps

Ability to create a PDF map of thematic maps.



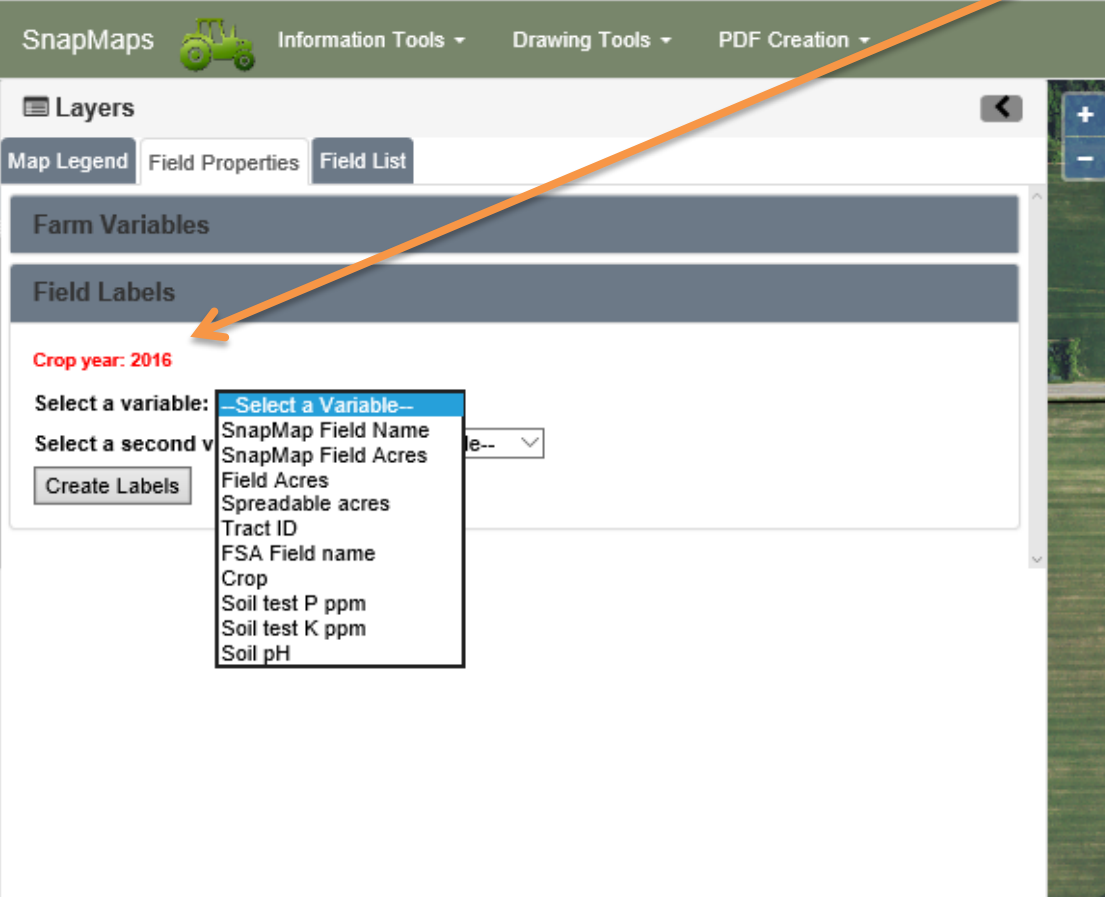



# Customizable field labels







# Customizable field labels

Limited set of variables to use. Only one year of data can be uploaded at a time.



SnapMaps  Information Tools ▾ Drawing Tools ▾ PDF Creation ▾

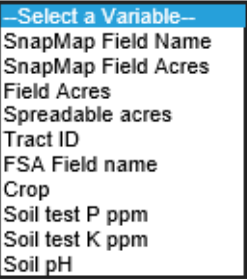
Layers    


Map Legend Field Properties **Field List**


**Farm Variables**

**Field Labels**

**Crop year: 2016**

Select a variable: 

Select a second variable: 



# Customizable field labels

N/A means no data is available for that field.

Multiple labels are put on separate lines.



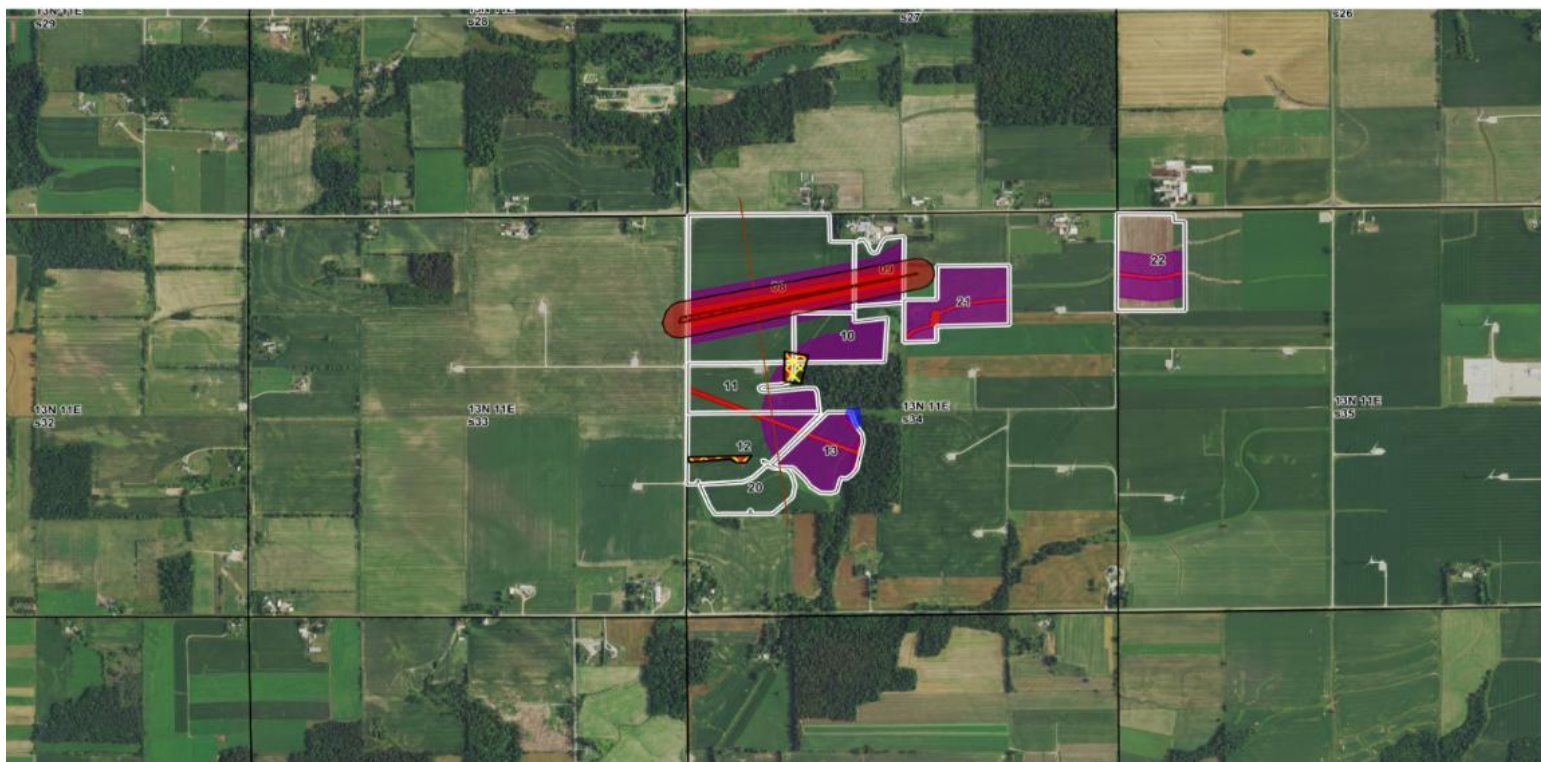
# CAFO spreading maps

## Spreading map

Farm Name: Columbia Sample Farm

Is this a CAFO: True

Map generated on: 8/4/2016 SnapMap Version: 16.0, Crop year: 2016



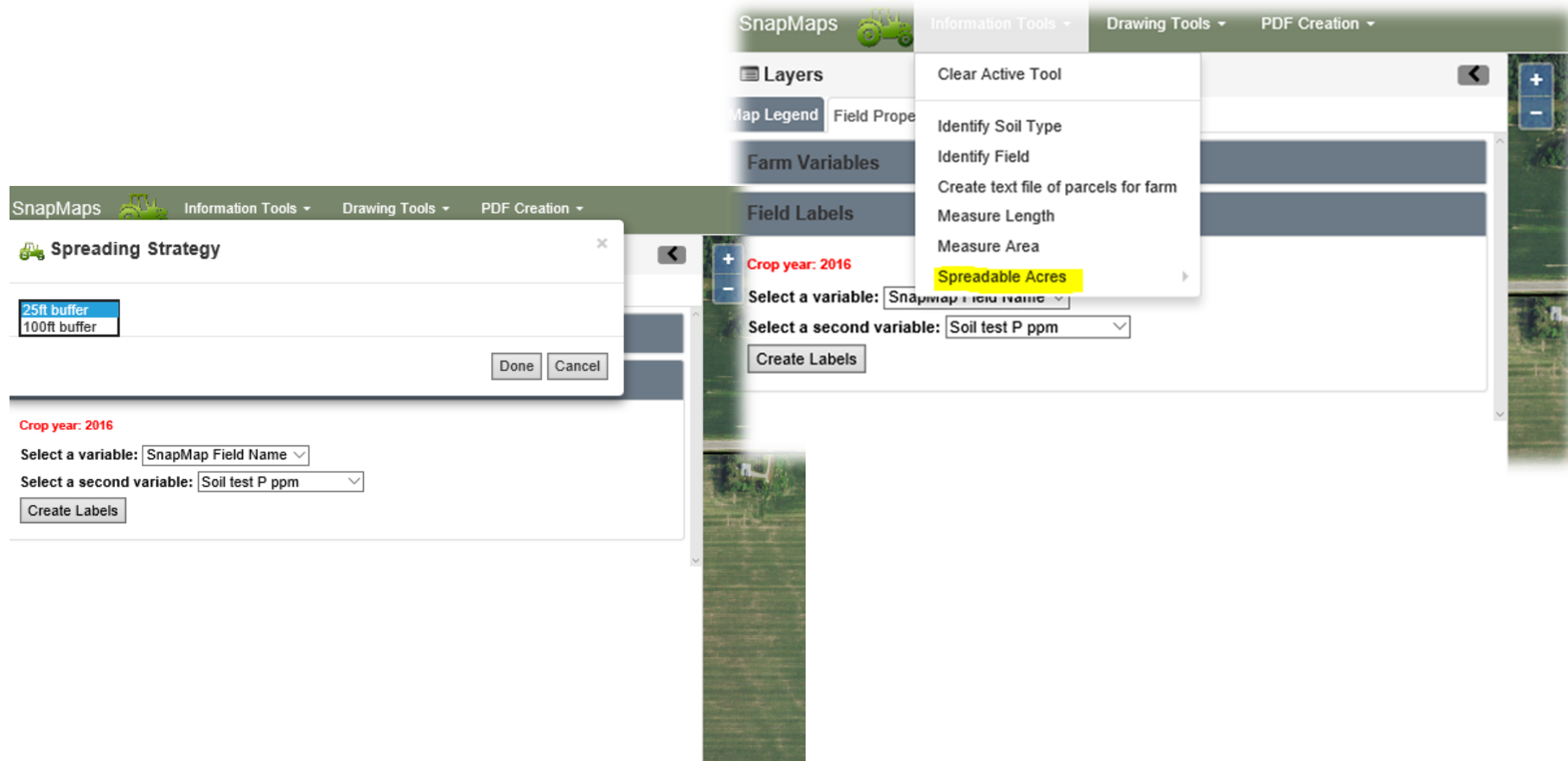
Legend (Spreading Map)

- No Spreading
- Injection only



# CAFO spreading maps

Ability to change between 25ft and 100ft strategies.



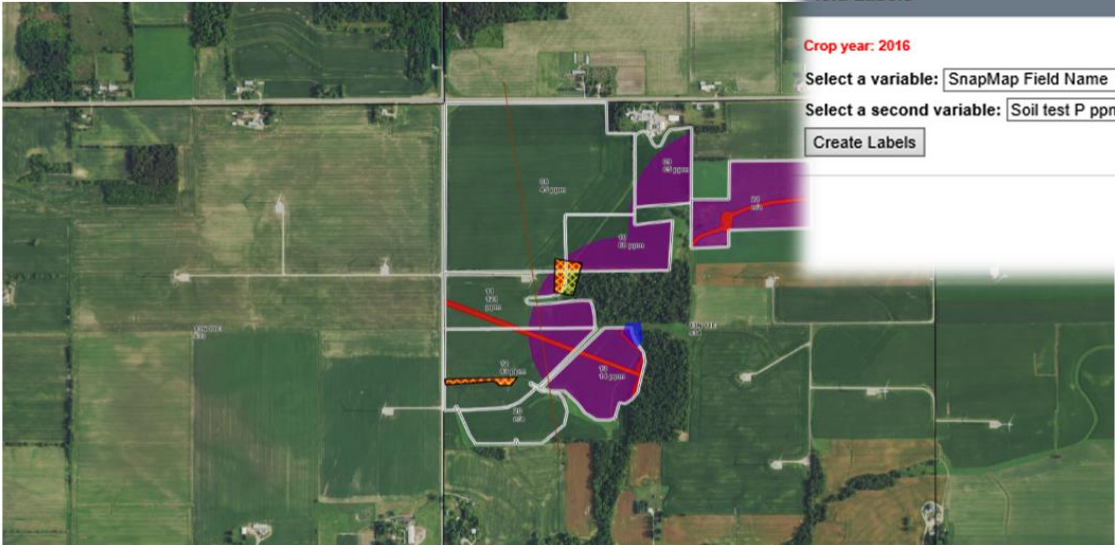
The screenshot displays the SnapMaps web application interface. The top navigation bar includes 'SnapMaps', 'Information Tools', 'Drawing Tools', and 'PDF Creation'. The main interface shows a 'Spreading Strategy' dialog box with two radio buttons: '25ft buffer' (selected) and '100ft buffer'. Below this, there are dropdown menus for 'Crop year: 2016', 'Select a variable: SnapMap Field Name', and 'Select a second variable: Soil test P ppm', along with a 'Create Labels' button. A 'Field Labels' menu is also visible, listing options such as 'Clear Active Tool', 'Identify Soil Type', 'Identify Field', 'Create text file of parcels for farm', 'Measure Length', 'Measure Area', and 'Spreadable Acres' (highlighted in yellow). The background shows a map of a field with a green tractor icon.

# CAFO spreading maps

Printable as a PDF Map.

Test

Farm Name: Columbia Sample Farm  
 Is this a CAFO: True  
 Map generated on: 8/8/2016 SnapMap Version: 16.0, Crop year: 2016



Legend (Spreading Map)

- No Spreading
- Injection only

SnapMaps
 Information Tools
 Drawing Tools
 PDF Creation

Layers
 Map Legend
 Field Properties
 Field List

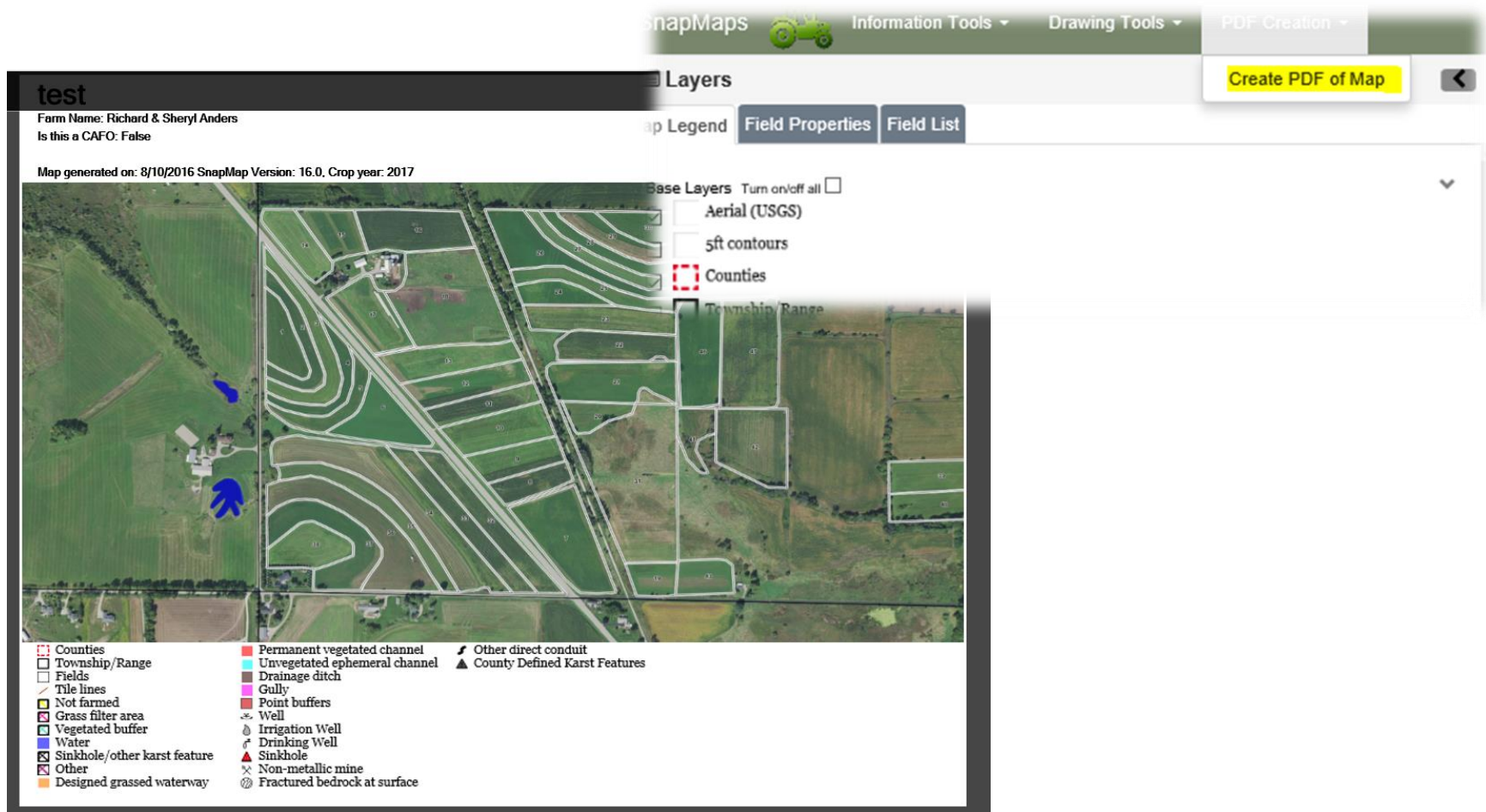
Farm Variables
 Field Labels

Crop year: 2016  
 Select a variable: SnapMap Field Name  
 Select a second variable: Soil test P ppm  
 Create Labels

Create PDF of Map  
 Create PDF Spreading Map



# Create a PDF



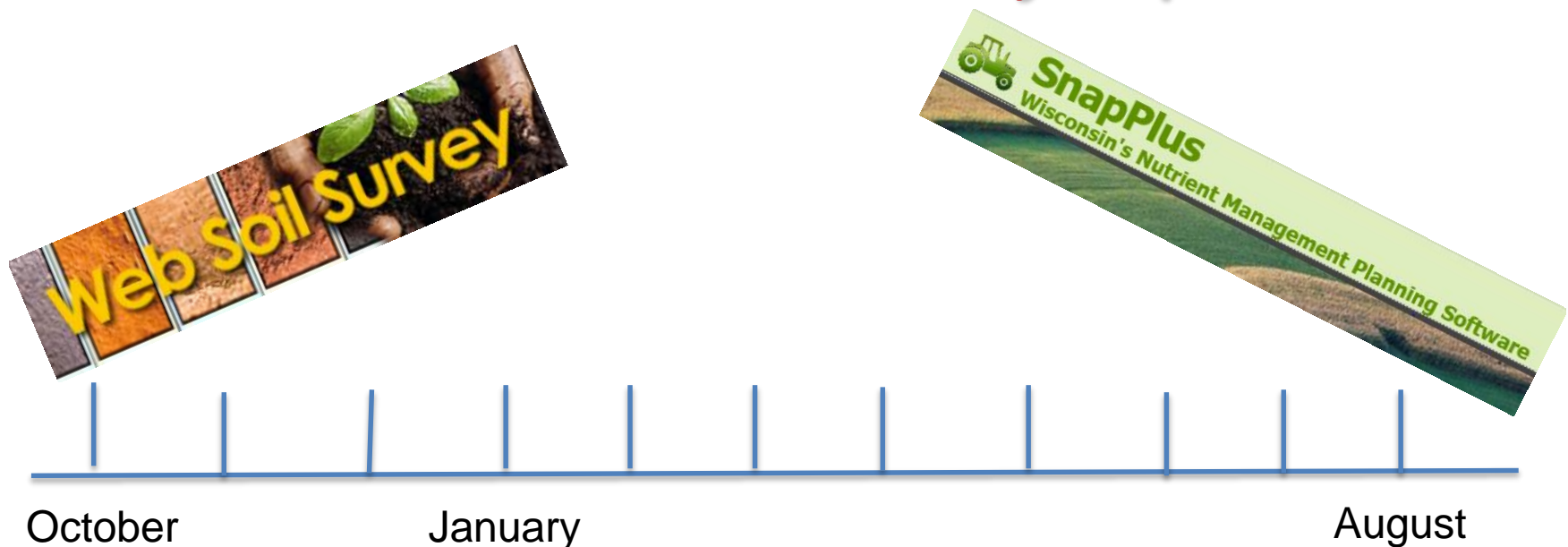
# Questions, Suggestions, Comments

[support@snapplus.wisc.edu](mailto:support@snapplus.wisc.edu)

# Important info for planners

SnapPlus 16.0

# Version 16 Incorporates 2015 Web Soil Survey Updates



Planned delay between Web Soil Survey updates and  
SnapPlus Beta release

# Soil Survey Updates

## *Few new soil map units*

Note: In SW counties, “Dubuque” is starting to “disappear”.

V. 15

Iowa	▼	DtB2	▼	DUBUQUE
------	---	------	---	---------

V. 16

Iowa	▼	DtB2	▼	PALSGROVE
------	---	------	---	-----------

Replaced by soil series with same NMP properties  
No changes to recommendations

# Soil Survey Updates

Changes to T and K continue (but much fewer)

Some changes to 590 W, P, R and CAFO W and R soils

**Support**

**Planning Info**

- NM Updates
- NM Resources
- NM Data Dictionary
- Soils Details – 2016**
- Soils Details – 2015



## SnapPlus

Wisconsin's Nutrient Management Planning Software



**SnapPlus**

- Home
- About SnapPlus
- Downloads
  - Download 15.1
  - What's New in 15.1
  - Installation Details
  - Download 16.0 Beta

## Soils Details – 2016

### Soil survey and soil map unit information updated

Soil map unit names and classifications have been updated to correspond with October 2015 Soil Resource Conservation Service (NRCS).

**Wisconsin soil map unit characterization changes 2016**

## Special Notes:

W soils have a continuous water table, not perched

Hydrologic soil group (runoff category) changes can cause changes in P Index results

# Soil Survey Updates

No changes to A2809 interpretations:

Yield Potential = Response to N (H,M,S)

Soil Group (S,L,O)





# New Crops and Tillages

No new crops, just new combinations

Added different tillage operations for double crops.

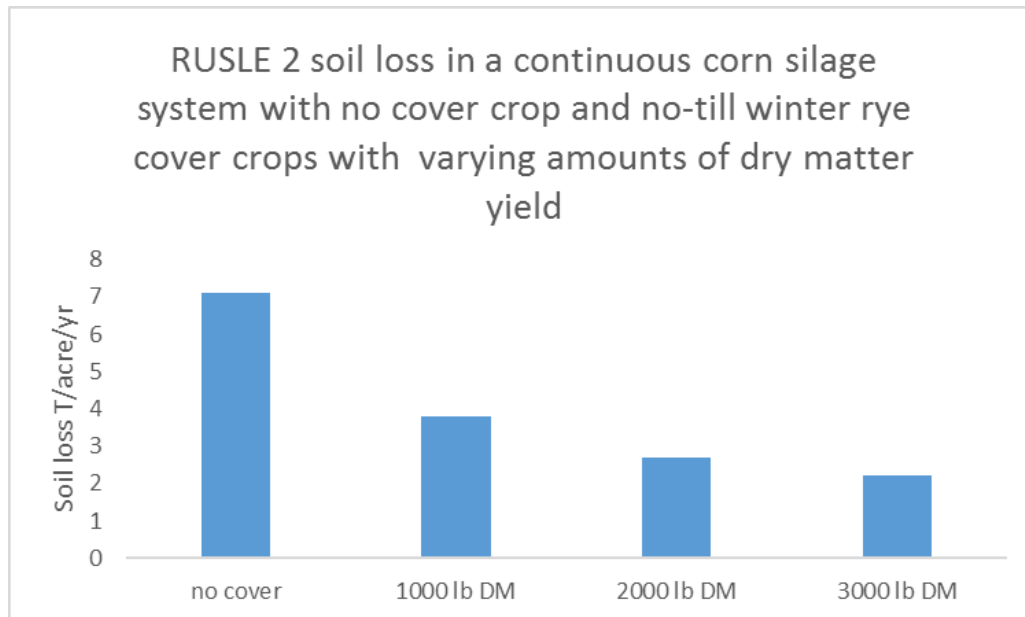
II):	2017	2018
Op:	Oat-Pea Forage to Snap ▼	Snapbean to Snapbe
al:	2.0-3.5/3.6-4.5 ▼	1.5-2.5/1.5-2.5
ge:	crop 1: Fall Chisel, disk, ▼	Fall Chisel, disked
te:	<div> crop 1: Fall Chisel, disk, crop 2: Disk  crop 1: Fall Chisel, no disk, crop 2: Disk  crop 1: Fall MB Plow, crop 2: Disk  crop 1: Spr. Chisel, disked, crop 2: Disk  crop 1: Spr. Chisel, no disk, crop 2: Disk  crop 1: Spring MB Plow, crop 2: Disk  No Till  Spring Cultivation </div>	
ec:		
fo:		
es:		
re)		
on:		

# More Cover Crop Options

More variety and more combinations

Caveats:

RUSLE2 assumes average biomass production that may not be achievable in Northern WI



April rye growth with different planting dates



From: K.Shelley, Planting Winter Rye After Corn Silage



# SnapPlus

Wisconsin's Nutrient Management Planning Software

**Version 16 follows  
2005 590 Standard**

**But contains most of the  
information needed to  
follow 2015 590 Standard**

# Preparing for Implementation of 2015 590

## Winter Manure Application Planning

Requires documentation of manure storage

Planning to spread 14-day manure production

Special planning requirements for:

- ☐ Fields  $> 6\%$  slope (+ have to show no other suitable fields)
- ☐ Fields with concentrated flow channels



# Winter spreading report 1.0

- Manure Production (14-day and 120-day)
- Storage
- Fields with planned winter applications
- Total planned winter manure application amount
- Fields with no winter restrictions

Farm name: Riverside farm 3 26 16.snapDb  
Location: C:\SnapPlus2\Alpha\MySnapPlusData

farm Soil Tests Snap Maps Fields Nutrients Cropping Daily Log Reports

1 of 2 Page Width Find Next

Riversidefarm32616 - Winter Spreading Plan Report 2016 08/21/2016

**Winter Spreading Plan - 2016**  
All fields


**Manure Production for 2016**

Animal Type and Size	No. of head	lb/day per animal	Liquid gal/day per animal	14-day production as tons*	14-day production as gallons*	120-day production as tons*	120-day production as gallons*
Dairy Calf 250 lbs	23	21	8.1	3	2,608	29	22,356
Dairy Dry Cows 1200 lbs	3	98.5	38.7	2	1,625	18	13,932
Dairy Heifer 1000 lbs	24	82	32.4	14	10,886	118	93,312
Dairy Heifer 750 lbs	22	65	24.84	10	7,651	86	65,578
Dairy Lactating Cows 1200 lbs	65	127	49.5	58	45,045	495	386,100



# Issues with Winter Spreading Report 1.0






Will need to enter animal numbers and storage info

Crop Year: 2017 


Nutrient sources | **Manure production estimator** | Animal units calculator | Grazing herd setup | Manure Analysis

NOTE: Animal categories are from [590 Technical Note, WI-1](#)

**Livestock Manure Production Estimator**



 Add All Dairy
  Add All Beef
  Copy Manure Production

	Animal Type and Size	Subfarm	Barn	No. of head	Solid (lb/day)	Liquid (gal/day X dilution factor)	Total No. of days	
▶	Dairy Dry Cows 1200 lbs	▼	▼	3	98.5	11.94x1.8=21.5	365	
	Dairy Calf 250 lbs	▼	▼	23	21	2.47x1.8=4.5	365	
	Dairy Heifer 750 lbs	▼	▼	22	65	7.70x1.8=13.8	365	
	Dairy Lactating Cows 1200 lbs	▼	▼	65	127	15.98x1.8=28.8	365	

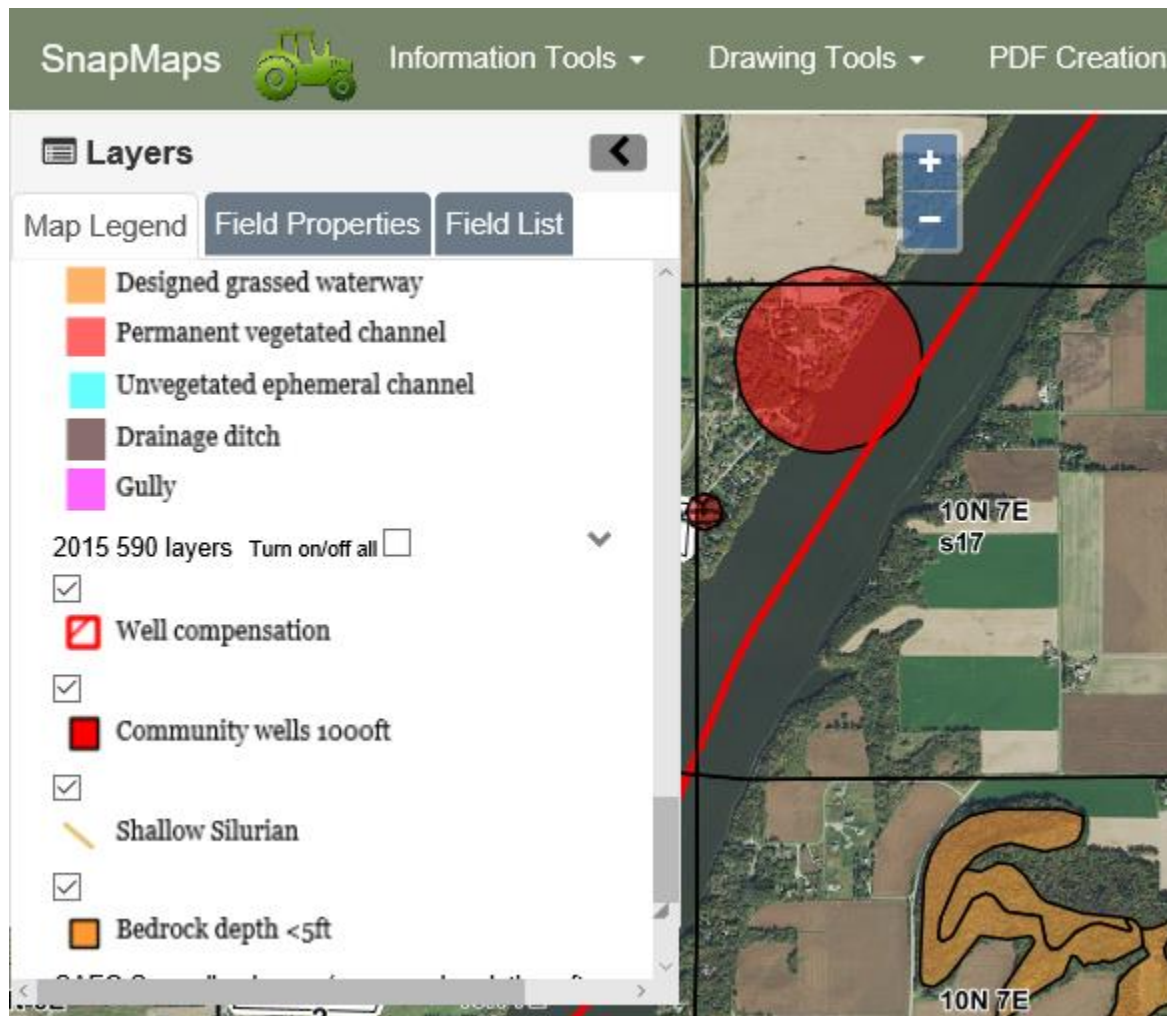
 Delete All

Will need to indicate if animals not present in winter

# SnapMaps for 2015 590

Locating:

- Gullies
- Ephemeral erosion
- Concentrated flow channels
- Tile lines
- New restriction layers






# More for 2015 590: Odds and Ends

Added Treated Manure to Nutrient Sources

	Source name	Season	Spread method	Rate	Units
▶	Dairy Grazing	Graz...	Grazing	5	tons/a..
	Treated Manure Solid	Fall	Unincor...	10	tons/a..
	Treated Manure Liquid	Fall	Incorpor...	10,000	gals/a..

Spread Name	Load Size	Tons or Gallons	No. of loads per year	Spread Annually (tons or gallons)	Calibration Date	Calibration Method	Rate (tons/a or gal/a)	Notes
▶ Side-slinger	6	Tons ▼	420	2,520	2016-08-22	▼	0	
							<none> Spreader weight / area Spreader load(s) / area Manure density X volume / area Custom application	

 Delete All

**Farm Totals:**

2,520  
Tons

0  
Gallons

Added Calibration Method to Spreader Table

# **Questions, Suggestions, Comments on Winter Spreading Report and other features for 2015 590**

**support@snapplus.wisc.edu**